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A measure of maintenance training/qualification readiness and its impact on billet life cycle cost

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NAVAL POSTGRADUATE SCHOOL
Monterey, California

THESIS

A MEASURE OF MAINTENANCE
TRAINING/QUALIFICATION READINESS
AND ITS IMPACT ON BILLET LIFE CYCLE COST

by

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September 1983

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This thesis identifies a means of computing the dollar value loss from enlisted maintenance personnel training/qualification degradation. This was accomplished by reviewing existing manpower and training requirements, establishing a measure of activity Maintenance Department Training/Qualification Effectiveness, and adjusting Billet Life Cycle Cost by the degree of training/qualification deviation. The precepts of this

thesis have application beyond the aviation community.

A Measure of Maintenance Training/Qualification Readiness and its Impact on Billet Life Cycle Cost

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ABSTRACT

This thesis identifies a means of computing the dollar value loss from enlisted maintenance personnel training/qualification degradation. This was accomplished by reviewing existing manpower and training requirements, establishing a measure of Activity Maintenance Department Training/Qualification Effectiveness, and adjusting Billet Life Cycle Cost by the degree of training/qualification deviation. The precepts of this thesis have application beyond the aviation maintenance community.

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I. INTRODUCTION

A review of performance indicators over the past several years reveals that maintenance capabilities in Naval Aviation squadrons have deteriorated due to inadequate levels of enlisted maintenance personnel training. Deficiencies in formal training and personnel qualifications have resulted in reduced maintenance readiness. The deterioration in maintenance readiness can be traced directly to nonexistent, inadequate, or improper use of existing manpower resource programs. This situation is further exacerbated by inadequate or nonexistent follow-on training programs. [Ref. 1]

The operation and maintenance of systems account for a major portion of system life cycle cost. Studies of systems annual support costs show that manpower consistently consumes over half of the funds appropriated for operation and maintenance of the system [Ref. 2]. Of the $156.1 billion spent on national defense in 1981, about 60% went to personnel costs [Ref. 3]. As a subset of personnel costs, individual training cost for active duty and reserve personnel was approximately $8.8 billion [Ref. 4].

The above figures reflect expenses only from the type of training that takes place in formal military schools. Upon graduation from military training schools, personnel are

assigned to operational commands where a continual process of follow-on training commences. Ideally from an operational commanders point of view, new technicians would arrive possessing at least the journeyman level of ability. This is almost never the case. In fact, new technicians must go through either additional informal or formal apprenticeship training programs, which can result in readiness and training inefficiencies. With this in mind, the intent of this thesis is to estimate the possible dollar value loss resulting from maintenance training and qualification deficiencies. To accomplish this a standard training and qualification level will be established and deviations from this level computed.

It is presumed that a correlation exists between the level of maintenance department training and qualifications, and the ability of the activity to carry out assigned mission tasks. To facilitate establishment of a measure of activity maintenance department training and qualification effectiveness, the following steps shall be taken:

1. Determine authorized manning for a squadron's Maintenance Department utilizing the Squadron Manning Document (SQMD) and the Manpower Authorization (MPA), OPNAV 1000/2.

2. Compare onboard personnel resources from the Enlisted Distribution Verification Report (EDVR) with the OPNAV 1000/2.

3. Determine all training and qualifications required for each authorized Billet Sequence Number (BSN).

4. Identify a method to categorize and weight the various elements of personnel training and qualifications, giving an ideal level of training and qualifications.

5. Compare each member's actual level of training and qualifications with the derived ideal level.

6. Determine the deviation between the actual and ideal levels of training and qualifications found in Step 5.

7. Use the Life Cycle Cost of selected billets within the Maintenance Department to estimate the dollar value of qualification deviation.

Utilization of the above methodology will identify the specific areas and magnitude of activity maintenance training and qualification deficiencies. Once these deficiencies are identified, corrective actions can be determined. Implementation of the contained suggested corrective actions may result in increased maintenance training effectiveness, and therefore a corresponding increase in the level of mission capability.

II. MANPOWER DETERMINATES

The establishment and promulgation of policy regarding the management of enlisted personnel assigned to naval activities is contained in OPNAVINST 1000.16E [Ref. 5]. However, when dealing with disciplines as broad and diverse as Manpower, Personnel and Training, the policies of reference 5 require development of individual management plans that integrate these broad policy guidelines into workable activity programs. In order to develop a workable program, a thorough understanding of the existing Navy Total Force Manpower System is required. The following subsections are included as a brief explanation of the Navy Total Force Manpower System.

A. PRELIMINARY SQUADRON MANPOWER DOCUMENT

Manpower and training resources are determined by development of Preliminary Squadron Manpower Documents (PSQMDs), which identify the quantitative and qualitative manpower requirements associated with new hardware. The development of PSQMDs is an integral part of the Navy Training Plan (NTP) process as defined in "Responsibilities for the Development of Training Requirements and Training Plans", OPNAVINST 1500.44 [REF. 6]. The Navy Training Plan

delineates the total training resources required to adequately train personnel in support of the activity.

B. SQUADRON MANPOWER DOCUMENT

Once a new aircraft is introduced to the fleet the PSQMD is superseded by an approved Squadron Manpower Document (SQMD). The Squadron Manpower Document provides a defensible technique for the determination of billet requirements and is published as 5320 series OPNAV instructions. SQMDs are published for identically equipped squadrons as "class" documents. Unique squadrons have individual SQMDs and all aircraft squadrons are included in the SQMD program. The primary factors utilized in the development of the SQMD are the Required Operational Capabilities (ROCs) and the Projected Operational Environment (POE). The ROC provides a definition of the squadrons mission, and the POE is a description of the squadrons wartime environment.

Various types of quantitative data are also required to produce an SQMD. Major emphasis is placed on determining the planned and corrective maintenance manhours for the type of squadron. Planned maintenance manhours are extracted from Maintenance Requirements Cards, indirect manhours from existing standards, and corrective maintenance manhours are computed from historical data. The resulting composite manhours are utilized to forecast the number and type of personnel required to support the scenario specified in the

POE, which determines the number and types of billets required. The SQMD thus developed is unconstrained by dollars.

C. MANPOWER AUTHORIZATION

The SQMD serves as the basis for the Manpower Authorization (MPA), OPNAV 1000/2. The MPA approximates the SQMD billet requirements, less Mobilization Billets, which will be filled by Selected Reserves during time of mobilization [Ref. 7]. The Billets Authorized on the MPA indicates the manning levels authorized by the Chief of Naval Operations (CNO) after considering the current budgetary constraints, priorities, and manpower policies.

The determination of Navy Manpower Authorization requirements is accomplished within the framework of the Department of Defense Planning, Programming, and Budgeting System (DOD PPBS). This system operates on an 18-month cycle initiated annually [Ref. 8]. Events in this cycle which are necessary for the development and authorization of Navy manpower requirements are briefly summarized:

1. Intelligence

Intelligence is collected and an appraisal made of the threat to the security of the nation.

2. National Strategy

Based upon national policy decisions, a strategy to meet the threats of national security is developed. This

strategy is not fiscally constrained, and identifies requirements and objective forces necessary to meet the threat.

3. SECDEF Guidance

The Secretary of Defense issues the Guidance for Preparation of the Program Objectives Memorandum (POM).

4. Program Objectives Memorandum (POM)

The POM contains forces and resources recommendations with rationale and risk assessment, and is fiscally constrained to conform with the Fiscal Guidance previously issued by the Secretary of Defense. [Ref. 9]

It is important to note that the Manpower Authorization is extremely sensitive to fiscal policy. Therefore, the manpower authorization level for given activities is subject to manning level fluctuations in concert with existing political circumstances.

D. ENLISTED DISTRIBUTION VERIFICATION REPORT

The Enlisted Distribution Verification Report (EDVR), EPMAC 1080 lists, in several sections, the actual onboard manpower resources available at the activity. The most important elements of information contained in the EDVR consist of the Navy Manpower Plan (NMP) allowance, Rate, Rating, and Navy Enlisted Classification (NEC) codes assigned to individual members. The EDVR is a manpower accounting tool which attempts to, but unfortunately does

not, directly interface personnel with billets authorized by the activity's 1000/2. The EDVR is a reflection of the "fair share" manning posture of the Navy for each individual squadron or Unit Identification Code (UIC).

Figure 1. graphically depicts the relationship between the various elements of the Navy Total Force Manpower Management Plan.

Figure 1: MANPOWER DETERMINATION MODEL

```
                                   ACCESSION <----LOSSES/  <--
                                     PLANS     DEFICIENCIES   |
                                       |                      |
                                       |                      |
ROC -------->                          |                      |
            |              POM      OPNAV      INVENTORY      |
POE -------->|---> SQMD ------->    1000/2 -------------->  EDVR
            |          <-------     (MPA)  <--------------  (NMP)
WORKLOAD --->               $          |     REQUIREMENTS     |
  DATA                                 |           ^          |
   ^                                   |           |          |
   |                               TRAINING ----> GAINS       |
   |                                 PLANS                    |
   |                                                          |
   |                                                          |
    <--------- TASKING, EQUIPMENT, PERFORMANCE <----------
```

Briefly, the ROC, POE and Workload Data determine the SQMD configuration, which in turn is constrained by various budgetary and manpower policies and CNO priorities to produce the OPNAV 1000/2. The OPNAV 1000/2 in turn authorizes the manpower inventory level contained in the EDVR. Suffice to say, the SQMD defines the manpower

resources required to accomplish the mission, the OPNAV 1000/2 defines the manpower resources that can be obtained due to various constraints, and the EDVR is an inventory of actual onboard activity manpower.

III. TRAINING IN SUPPORT OF MAINTENANCE

Programs and systems up to this point have been addressed in a most general sense and are equally applicable to manpower functions in all Naval communities. This thesis deals with the maintenance departments of a selected set of aircraft squadrons. From this point on, specific programs applicable to the fixed wing patrol (VP) community will be used for illustrative purposes. Although a specific aviation community was used in development of this thesis, the underlying management principles are applicable to other communities.

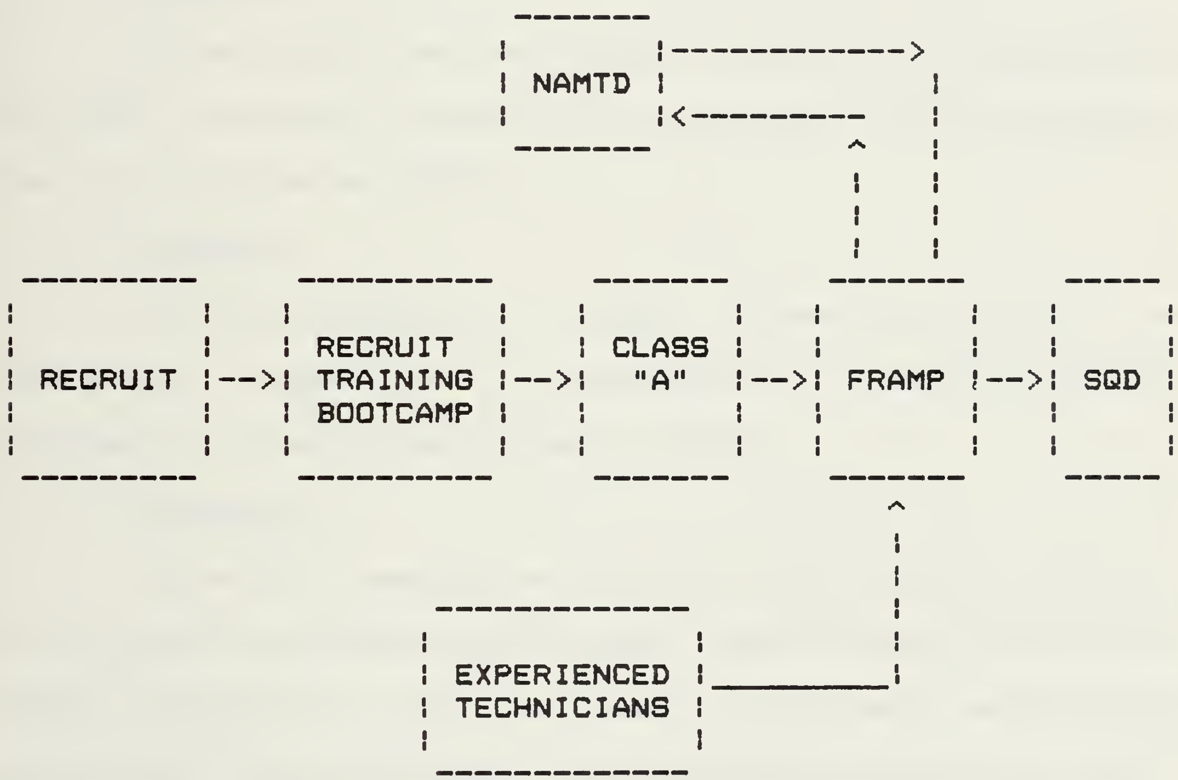
A. PIPELINE TRAINING

The logistics channel which provides trained technicians to the maintenance departments of aircraft squadrons, commonly referred to as the "training pipeline", is illustrated in (Figure 2).

Following recruit training, selected personnel receive general technical training in a Group IX (aviation specialty rating), such as: Aircrew Survival Equipmentman (PR), Aviation Structural Mechanic (Safety Equipment) (AME), and Aviation Electronics Technician (AT). This training is highly individualized, consisting of computer based instruction, programmed instruction, demonstrations and

on-the-job training. For the most part, there is no standard length for this training, however, a typical Aviation Electronics Technician will receive approximately 12 months of training in a class "A" school.

Figure 2: MAINTENANCE TRAINING PIPELINE



NAMTD = Naval Aviation Maintenance Training Detachment
FRAMP = Fleet Readiness Aviation Maintenance Personnel Training Program
SQD = Squadron

Following "A" school, an "AT" with orders to an aviation squadron will attend the Fleet Readiness Aviation

Maintenance Personnel (FRAMP) training program to receive specific training on aircraft type. This training can take another three to six months. Other non-designated and "rated" (ie. PR, AME, etc.) aviation personnel attend FRAMP courses, for their type aircraft, for periods generally less than three months. FRAMP training consists of the following three phases:

1. Phase I

Phase I provides the trainee with an introduction to the type aircraft, systems and components, the PQS program, and is conducted by FRAMP.

2. Phase II

Phase II consists of formal classroom training on designated systems and is conducted by a Naval Aviation Maintenance Training Detachment (NAMTD).

3. Phase III

Phase III consists of practical job training designed to reinforce previous instructions and includes training by FRAMP instructors on the aircraft in correct maintenance procedures and operational and functional checks to repair common maintenance problems encountered [Ref. 10].

Upon the completion of FRAMP training, the Navy has made a significant capital investment in the maintenance technician (Approximately $41,217 for an AT3 after only two years of enlistment) [Ref. 11].

B. FOLLOW-ON TRAINING

The purpose of follow-on training is not only to prevent the deterioration of the knowledge and skills gained through initial training, but also to increase the skill and knowledge of the maintenance technician. In this way he can advance from the apprenticeship level to the fully qualified journeyman level. Follow-on training is also necessary to keep abreast of technological advances. The ultimate goal of follow-on maintenance training and training in general is increased operational readiness.

Six forms of follow-on training utilized by the aviation community are:

1. Advancement in Rate Training

Advancement in rate training is usually accomplished by all paygrades E-1 through E-8 in the form of General Leadership and Professional Technical correspondence courses. These courses, usually completed during off-duty hours, are forwarded up the chain of command for grading, with the results of successful completion entered into the member's personnel record. Once successfully completed, the correspondence courses serve as partial fulfillment of the requirements for advancement in rate.

2. General Military Training (GMT)

General Military Training is a combination of formal lectures prepared by higher authority and local activities. These lectures are taught by experienced, senior enlisted

and junior officers and range from relations with foreign nationals to personnel hygiene.

3. Formal In-sevrice Training

Formal in-sevrice training is conducted through locally prepared lectures which are taught by experienced technicians detailed from the squadron maintenance department.

4. On-The-Job Training

On-the-job training (OJT) is the practical instruction of personnel in the performance of maintenance tasks, while under the supervision of experienced personnel. On-the-job training can be provided through demonstration, simulation, or supervised application of maintenance tasks.

5. Formal Additional School Training

Occasionally, maintenance or support personnel must be sent back through some or all of the training pipeline to acquire additional skills. Additional schools require the member to be transferred from the squadron on a Temporary Duty (TAD) basis, resulting in lost manhours and increased activity funding expenditures.

6. Personnel Qualification Standards (PQS) Program

The Personnel Qualification Standards Program is a method of qualifying officers and enlisted personnel in the performance of assigned duties. Derived through task analysis, PQS is a qualification guide which consists of a

written compilation of knowledge and skills required for a specific watch station, or for the maintenance of a specific piece of equipment or system. Often PQS requires an individual to perform as a "team" member within an assigned unit. The specific goals of the PQS program are to provide a means for monitoring an individual's training and qualifications, and to complement established formal training programs [Ref. 12].

It is important to understand that PQS is not a stand-alone training program. The success of a PQS based qualification program is dependent upon successful formal and informal training. For in-sevrice PQS training to effectively accomplish the goals of follow-on training, all aspects of in-sevrice training must be effectively performed.

IV. MAINTENANCE READINESS ESTIMATION

With few exceptions, maintenance capability readiness reporting is basically limited to the documentation of total numbers of Group IX (aviation specialty) personnel assigned to an activity together with a purely subjective estimate of current maintenance capabilities. No precise means exists Navy-wide to assess the impact of qualitative shortfalls in critical training, supervisory, or experience levels on activity readiness statistics.

> "Squadron commanding officers and maintenance officers are unable to quantitatively determine current or future 'states of readiness' in their maintenance departments and corrective actions can not, therefore, be initiated within work centers to shortcut projected experience, training or supervisory level deficiencies. As a consequence, work center capabilities due to various deficiencies can be allowed to progressively erode over a period of time and it is not until the critical point is reached that the full ramifications of the situation are realized. In these cases a squadron's total readiness posture may be affected (e.g., incapable/not ready to deploy) and extraordinary action is often required to alleviate the problem. Early identification of a potential problem allows for easier solutions to correct them." [Ref. 13]

The Commander Patrol Wings U.S. Pacific Fleet (CPWP), realizing the need for an effective maintenance capabilities index, directed the formulation and implementation of a series of Individual Work Center Skill Level Maintenance

Matrices in his squadrons. Figure 3 is an example of a CPWP Work Center Skill Level Maintenance Matrix. The matrices, when implemented in 1980, gave CPWP squadrons the ability to assess maintenance training and qualification shortfalls. [Ref. 14]

A. AVIATION TRAINING SUPPORT SYSTEM (ATSS)

In 1981 the CPWP Maintenance Matrices were automated by integration with the Aviation Training Support System (ATSS) located at Naval Air Station Moffett Field, California. By 1982, Naval Air Station Barbers Point, Hawaii had been included. The ATSS connection provided on-line real-time computer generation of squadron manning, training and qualification profiles for use by squadron commanding officers and the functional wing. ATSS is available to the squadrons at NAS Moffett, and NAS Barbers Point, Hawaii, via computer terminals in the squadron spaces and by mail at all active P-3 support sites. The ATSS computer is programmed to accommodate work center skill level maintenance matrices, which provide centrally managed information systems through which squadron work center capabilities can be updated, monitored and analyzed. These critical data are available to the administrative wing staff, allowing for review and analysis of work center capability data within the wing. The data can be utilized at the squadron and wing level to facilitate improved distribution of available manpower and

expertise. Further, these data were utilized as an information source for the data base of this thesis.

Figure 3: CPWP WORK CENTER SKILL LEVEL MAINTENANCE MATRIX

P-3C --- ELECTRIC/INSTRUMENT

RATE AND PAYGRADE	(1) REQD/ ONBD	NEC 7181	AE "A" SCHOOL	FRAMP E-602-1151 P-3C ELECT	E-555-0002 W/C SUPER	E-600-1100 NON DESIG AN	C-000-4176 AVIONIC CORR CONT	P Q S (2) P R O F 43232-5AQ1 ELEC	P R O F 43238-Q1 B.R./W.W.	P R O F 43238-Q2 APU OPER	N A M P W/C SUPER	N A M P W/C NON SUPER	N A M P CDI	(3) CDI	IDEAL PTS	SQDN PTS	(4) BONUS PTS.
	2 pts	1 pt	2 pts	2 pts	2 pts	1 pt	1 pt	3 pts	1 pt	1 pt	1 pt	1 pt	1 pt	2 pts			
AEC	1/					N/A									20		
AE1	1/					N/A									20		
AE2	1/				N/A	N/A									18		
AE3	3/				N/A	N/A					N/A		N/A	N/A	42		
AEAN	4/				N/A	**					N/A		N/A	N/A	56		
* E-1/2/3					N/A						N/A		N/A	N/A	0		
TOTAL PTS/ SQDN PTS	20/	10/	20/	20/	4/		10/	30/	10/	10/	3/	10/	3/	6/	156/		

NOTES: (1) 2 pts for each person assigned. (2) PQS points as indicated. (3) 2 pts for designated CDI, but no pts awarded until completion of NAMP CDI qualification plus a minimum of 50% of Professional PQS. (4) 2 pts for each person with any prior VP experience.

LEGEND: REQD/ONBD = Number of personnel required with the identified Rate and Rating.
NEC 7181 = P-3C Integrated Electrical System Organizational Level Specialist.
AE "A" = Aviation Electricians Mate Class "A" School.
E-602-1151 = FRAMP P-3C Electrical and Instrument School.
E-555-0002 = FRAMP Work Center Supervisor School.
E-600-1100 = FRAMP Non-Designated Airman School.
C-000-4176 = NAMTD Avionics Corrosion Control School.
43232-5AQ1 = P-3C Electrical Maintenance Technician PQS
43238-Q1 = P-3C Brake Rider/Wing Walker PQS
43238-Q2 = P-3C Auxillary Power Unit Operator PQS
W/C SUPER = NAMP Work Center Supervisor PQS
W/C NON SUPER = NAMP Work Center Non-Supervisor PQS
CDI = NAMP Collateral Duty Inspector PQS
CDI (3) = Squadron Designated Collateral Duty Inspector
IDEAL PTS = Total Points Available for Training/Qualification requirements
SQDN PTS = Points awarded to individuals during this quarter
BONUS PTS = Points awarded for prior P-3 experience
* = Non-designated
** = If Attended

B. MAINTENANCE MATRIX UTILIZATION

Specific squadron input based upon the review and analysis of work center skill level capabilities is provided to the Naval Military Personnel Command (NMPC) on a periodic basis. This information is available for use by detailing authorities in the detailing process. Thus, on a selected basis, the response time of the detailing system should be reduced. To illustrate, if a critical manpower or expertise shortfall is identified in a squadron utilizing the automated Skill Level Maintenance Matrices, the decision can be made to determine if extraordinary action is required to alleviate the shortfall, (i.e., modification of Permanent Change of Station (PCS) orders, or correction through formal schooling, or increased OJT, etc.). If order modification is found to be necessary by the command, liaison with NMPC can be initiated in an attempt to rectify this shortfall.

The CPWP Work Center Skill Level Maintenance Matrices contained numerous errors and inconsistencies (Billet Sequence Numbers (BSNs) missing, required schooling not identified, Navy Enlisted Classifications (NECs) inappropriate to the billet, etc.). In order to rectify this problem, and to focus specifically upon training and qualification requirements, a revised Maintenance Matrix was developed by these investigators. An example of a representative CPWP Work Center Skill Level Maintenance Matrix is included for illustrative purposes as Figure 3.

The complete set of Maintenance Matrices revised for this thesis are included in Appendix A.

Figure 4: W/C 220 ELECTRIC/INSTRUMENT MATRIX

BSN	RR	NEC	(#)	1R	2U	2V	2Z	2X	2Y	LP	6515	524N *OR* 201A	4176	8407	IPT
POINTS	02	01		03	01	01	01	01	01	02	02	2*1	02	01	
31050	AE1	7181	(1)												
	--	--		--	--	--	--	--	--	--	--	--	--	--	20
31060	AE2	7181	(2)												
	--	--		--	--	--	--	--	--	--	--	--	--	--	20
31080	AE3	7181	(3)												
	--	--		--	--	--	NA	--	NA	NA	--	--	--	NA	14
31110	AEAN	7181	(3)												
	--	--		--	--	--	NA	--	NA	NA	--	--	--	NA	14
SECTION	1	1		3	3	3	4	4	4	4	2	2	2	2	

LEGEND:
- 1R = ELECT. MAINT. TECH PQS
- 2U = WING WALK/BRAKE RIDER PQS
- 2V = AUX POWER OPERATOR PQS
- 2Z = W/C SUPERVISOR PQS
- 2X = W/C NON-SUPERVISOR PQS
- 2Y = CDI PQS
- LP = DESIGNATED CDI
- 6515 = AE 'A' SCHOOL
- 524N = ELECT/INST. MAINT SCHOOL
- 4176 = AVIONICS CORROSION CONTROL SCHOOL
- 8407 = W/C ADMIN SCHOOL
- 201A = NON-DESIGNATED AIRMAN SCHOOL
- BSN = BILLET SEQUENCE NUMBER
- RR = RATE & RATING REQUIRED FOR BILLET
- NEC = NAVY ENLISTED CLASSIFICATION
- IPT = IDEAL POINTS

Figure 4 (a subset of Appendix A), is a representative example of a Maintenance Matrix designed for the P-3C electric shop, Work Center 220. Total work center manning requirements, paygrade structures, and all NEC's are extracted from the squadron's current OPNAV 1000/2. Formal school requirements for each Billet Sequence Number (BSN) are identified from the NTP. PQS, Collateral Duty Inspector (CDI), Ground Support Equipment (GSE) and other pertinent qualification requirements are depicted for a fully manned and fully qualified work center.

C. THE MAINTENANCE MATRIX STRUCTURE

The Maintenance Matrix is composed of five functional areas (sections), which identify manpower, training and qualification requirements, and prior P-3 experience. Each section is composed of individual elements which have been assigned an arbitrary point value. The arbitrary point values are assigned by their relative importance and not by their difficulty to achieve. Point values can be adjusted to emphasize any training or qualification area of particular interest.

The five sections of the Maintenance Matrix are:

1. <u>Section One: Manning and NEC</u>

Section One defines the Rate, Rating and NEC authorized by the activity OPNAV 1000/2. The billet incumbent was assigned an arbitrary two points if his Rate

and Rating (RR) matched the billet requirement, and one point if he possessed the correct Primary and/or Secondary NEC. The total number of BSNs authorized for the Rate, Rating and NEC mix is also shown (#).

2. Section Two: Formal Schools

Formal school qualifications are included in Section Two of the Maintenance Matrix, and are composed of schools required by the individual's rate ("A" School, "C" School, etc.), NEC and those formal schools required by the NTP. The schools noted in Section Two are particularly important in this analysis, as they indicate the amount of training and qualifications that are required at squadron check-in. This amount is later referred to as the "Check-in" percentage (Ck-in %).

3. Section Three: Professional PQS

Professional Personnel Qualification Standards (PQS) are included in Section Three. Each element of this section was arbitrarily weighted in accordance with its relative importance to the billet incumbent's rate, as established by CPWPINST 5320.1A, [Ref. 15].

4. Section Four: NAMP PQS

Naval Aviation Maintenance Program (NAMP) PQS, is arbitrarily weighted and delineated in the same manner as Professional PQS (Section Three).

5. <u>Section Five: Prior Type Aircraft Experience</u>

Prior type aircraft experience denotes the importance of follow-on detailing, and is arbitrarily weighted as two "bonus" points. Bonus points are not considered in the Ideal Point (I-Pt) totals contained in Figure 4. Bonus points have been added for prior type aircraft experience because these personnel often possess the experience required to assist other technicians in achieving timely qualifications.

The ideal amount of points possible per Billet Sequence Number (I-Pt) is determined by the addition of applicable manpower, training, and qualification factors for the billet (Sections One, Two, Three, and Four of the Maintenance Matrix). For example in Figure 4, a summation of the line labeled "Points" for BSN 31050, AE-1, is: RR (Rate & Rating Required for the Billet) = 2 points, plus; NEC (Navy Enlisted Classification) = 1 point, plus; 1R (Elect. Maint. Tech. PQS) = 3 points, plus; 2U (AUX Power Operator PQS) = 1 point, plus; ... 8407 (W/C Admin School) = 1 point. The total of the training and qualification elements on this line equals 20, thus the Ideal Point value is 20. The ideal point value for subsequent BSNs is computed in the same manner, omitting those elements marked "NA" (Not Applicable).

V. EFFECTIVENESS MODEL

Duplicate and parallel sources of data were used to verify the accuracy and authenticity of data extracted from the CPWP Skill Level Maintenance Matrix. One such set of data was the Survivor Tracking File (STF). The STF is maintained for all personnel serving on active duty or separated from service since July 1970. The information contained in the STF is submitted in accordance with DOD Instruction 1336.5 series, and was made available through the Defense Manpower Data Center (DMDC), Monterey, California. Specific elements of the Survivor Tracking File (Name, Rate, Paygrade, and Navy Enlisted Classification Code) were extracted for the seven study squadrons for the period from 31 December 1981 through 31 March 1983. These data were compared with each squadron's Enlisted Distribution Verification Report (EDVR).

Interestingly, the data gathered from the Survivor Tracking File (STF) proved to be extremely accurate when compared to Enlisted Distribution Verification Reports gathered on the studied squadrons. Out of the approximately 800 enlisted service members contained in the study data base, no errors were detected on the STF.

The following documents were used to extract and structure source data for the effectiveness model:

1. OPNAVINST 5320.187, SQMD, dated 16 July 1981.

2. OPNAVINST 1000/2, dated November 1982, for each of the seven identified squadrons.

3. Enlisted Distribution Verification Reports for the seven UIC's during the period December 1981 through May 1983.

4. Selected elements of the Survivor Tracking File (STF).

5. CPWP Quarterly Maintenance Training Reports for the seven selected squadrons during the period November 1981 through May 1983.

A. QUALIFICATION AND TRAINING MATRIX

For the purposes of this thesis, a squadron's composite maintenance effectiveness was estimated by analysis of training and qualification indicators from among 106 (112 in Special Mission Squadrons) maintenance billets. A random sample of sixty billet sequence numbers, proportionally distributed by squadron and paygrade was produced through utilization of a random number generator. Only maintenance billets resident "on site" (e.g., AIMD, TAD billets excluded), were considered due to availability, completeness and accuracy of the data sought. The Billet Sequence Number distribution is included as Appendix B.

B. COMPUTATION

Prior to squadron check-in, maintenance technicians require formal schooling as outlined in the Navy Training Plan. This enroute schooling, identified in Section Two of the Maintenance Matrix, provides an initial starting point for the BSN incumbent's squadron training program. Further, this initial starting point coincides with the maintenance technician's check-in date, hereafter, referred to as month zero. A generally accepted philosophy amongst maintenance training officers interviewed is that: squadron maintenance technicians should complete Personal Qualification Standards (both Professional & NAMP) by their 18th month onboard. With this in mind, the squadron maintenance training program should be completed in 18 months. Therefore, a target line representing a desired rate of attainment of the training program can be derived.

This target line (Y) extends from the initial check-in date (month 0), to a 100% qualification level, indicative of training program completion at month eighteen. The (Y) intercept of the target line (b), is defined by the required amount of points resulting from formal training that should be accumulated prior to squadron check-in (Section Two of the Maintenance Matrix). A 100% qualification is assumed for the target line after the 18th month. Example 1 delineates this process.

EXAMPLE 1

In computing the "Target Line" the Slope-Intercept equation [Y = mX + b] is used,

where:

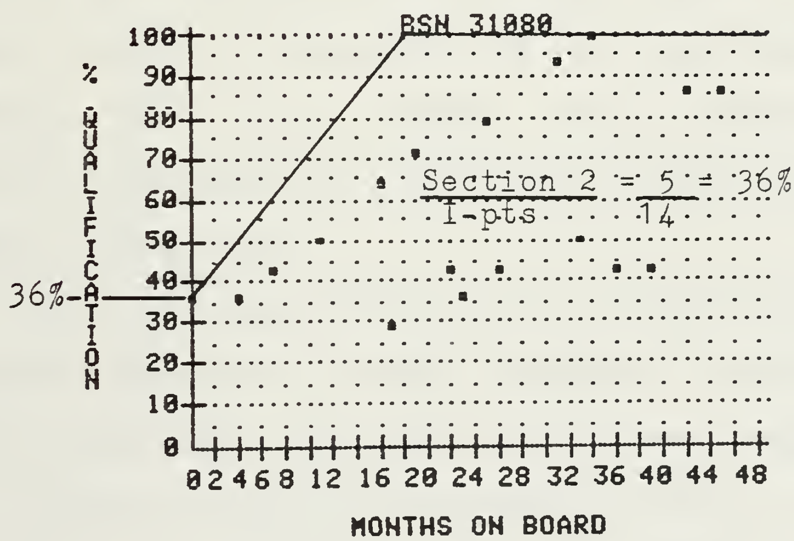
Y = Target Line
m = Slope
X = Months Onboard
b = Y intercept

The slope (m) of the target line is derived from using the following equation for determining the slope of a line from two points.

$$\text{Slope} = m = \frac{Yi - Yo}{Xi - Xo}$$

Therefore, as shown in Figure 5, for a AE-3 (E4), BSN 31080 the Ideal Points = 14, Section Two = 5, and the Y intercept (b) = 5/14, or 0.36.

Figure 5: TARGET LINE DETERMINATION



By using the two points (.36, 0) and (1.00, 18) the slope of the Target Line.

$$m = \frac{1.00 - 0.36}{18 - 0}$$

$$m = .04$$

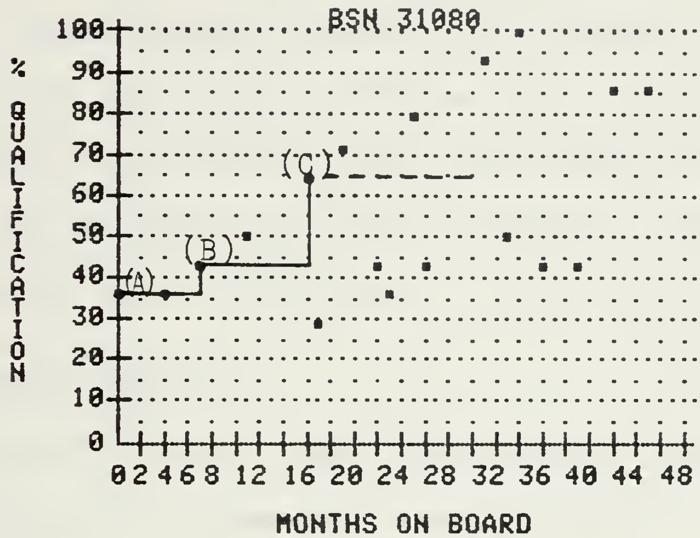
Substitution of (m) and (b) into the Slope-Intercept equation produces a target line equation of:

$$Y = .04X + .36$$

Although not specified by existing instruction, the 18 month qualification "window" appears reasonable due to the number of technicians that complete all training and qualifications in this time period. The average maintenance technician is onboard the command for approximately 36 months, and the 18 month qualification period moves the technician from the "apprentice" to the "journeyman" level approximately half way through his squadron tour. Consequently, 18 months is desirable for qualification from a management standpoint.

Individual attainment of training and qualifications do not necessarily follow a linear process. In actuality an individual progresses from month zero to month eighteen in a series of discrete steps as indicated in Figure 6. Each step is denoted by completion of a specific required training/qualification element.

Figure 6: STEP PROGRESSION OF TRAINING



Example 2 is provided to explain how the step progression of training normally occurs.

EXAMPLE 2

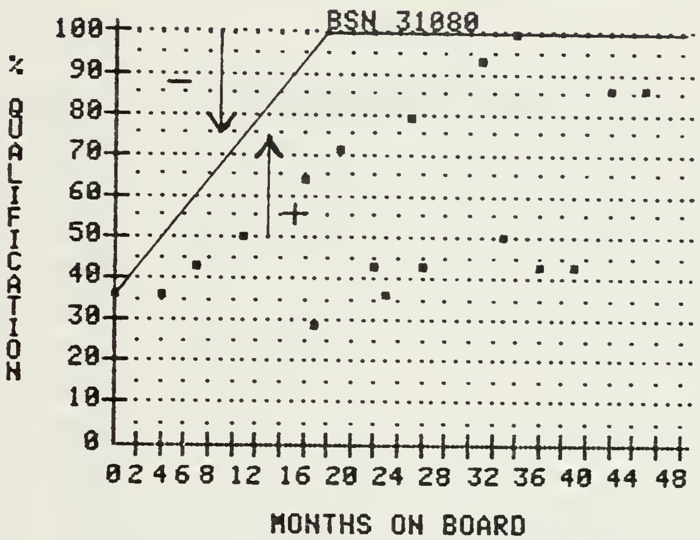
A fictitious AE-3 reporting onboard a typical squadron after completion of required enroute schools would have acquired 5 of the 14 ideal points for 36%. After seven months onboard, this fictitious aviation electrician's mate could have completed his Wing Walk/Brake Rider PQS (2U) for one additional point. This would now raise his percentage to 43%, as denoted by Point B on Figure 6. After an additional nine months of study and on-the-job training, he might have also completed the Electric Maintenance Technician PQS (1R) for three more points (Point C of Figure 6). Thus at the 16th month onboard, our fictitious AE-3 would have stepped from 36% at month 0, to 43% at month 7, to 64% at the 16th month.

Continuation of the sequence identified in Example 2 would result in a non-linear step function, depicting the incremental steps normally taken in training achievement. Analysis of the data base confirms this incremental step function, and also indicates that individuals seldom achieve the target percentage in the time alloted, resulting in a positive (below goal) deviation.

C. TRAINING DEVIATION

The complete data base compiled for this thesis is presently held by Commander Patrol Wing 10, NAS Moffett Field, Ca. 94035. A sample of the data base is contained in Appendix C. Like all data referenced in the analysis, Appendix C does not contain personal or squadron identifiers for reasons of privacy. The Work Center Training and Qualification data extracted from Appendix C is used in the generation of Appendix D, "Average Deviation Summary". Appendix D information is graphically depicted for the example work center BSN (31080) in Figure 7. Each individual's percentage of qualification per month is plotted on the graph. The deviation (d) of each point from the target line is then determined, summed, and averaged for each BSN. A positive deviation indicates the point is below the target line, and therefore below the goal, and a negative deviation indicates the point is above the target line (ahead of goal), as shown in Figure 7.

Figure 7: QUALIFICATION DEVIATION GRAPH

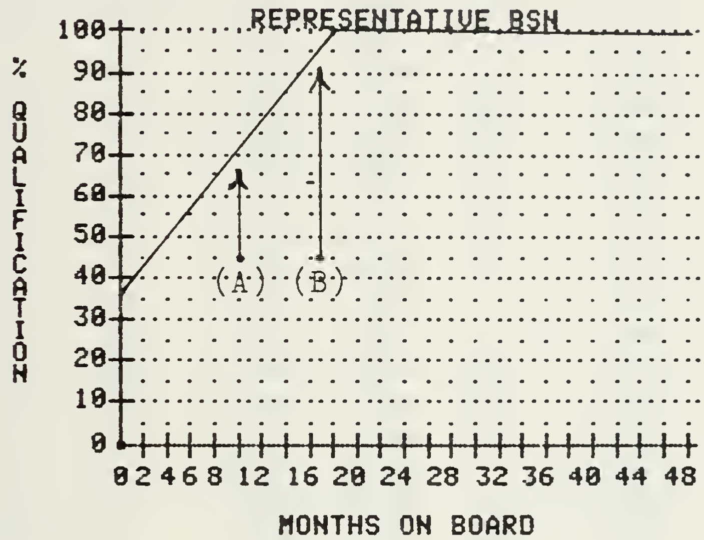


It is realized that the target line is arbitrary and does not represent manning or training requirements recognized by the Navy Military Personnel Command (NMPC) when it "details" enlisted maintenance technicians. However, additional follow-on maintenance training in the squadrons is required by the Chief of Naval Operations [Ref. 16]. The Maintenance Matrix provides a means of standardizing this additional follow-on maintenance training.

It is important to note that, although the two maintenance technicians represented by points (A) and (B) in Figure 8 are equally qualified in accordance with the

requirements of Appendix A, the technician at point (B) has a larger deviation from the target line.

Figure 8: DEVIATION COMPARISON



The difference of the deviations at points (A) and (B) is caused by the slope of the target line, and the difference in months onboard. Both technicians (A) and (B) are equally qualified. However, technician (B) more dramatically represents the squadron's inability to train maintenance personnel in a timely manner with existing resources. Therefore, it is assumed that technician (B)'s training and qualification condition is less satisfactory than technician (A)'s (indicated by a larger deviation).

Table I: BSN 31080 Target Line Average Deviation

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
31080								
	14	5	0.36	0.43	22	0.04	1.00	0.57
	14	5	0.36	0.64	16	0.04	0.93	0.29
	14	5	0.36	0.29	17	0.04	0.96	0.67
	14	5	0.36	0.43	36	0.04	1.00	0.57
	14	5	0.36	0.79	25	0.04	1.00	0.21
	14	5	0.36	0.50	11	0.04	0.75	0.25
	14	5	0.36	0.71	19	0.04	1.00	0.29
	14	5	0.36	0.43	39	0.04	1.00	0.57
	14	5	0.36	0.93	31	0.04	1.00	0.07
	14	5	0.36	0.36	4	0.04	0.50	0.14
	14	5	0.36	0.50	3	0.04	0.46	-0.04
	14	5	0.36	0.36	23	0.04	1.00	0.64
	14	5	0.36	0.86	42	0.04	1.00	0.14
	14	5	0.36	1.00	34	0.04	1.00	0
	14	5	0.36	0.43	7	0.04	0.61	0.18
	14	5	0.36	0.36	0	0.04	0.36	-0.00
	14	5	0.36	0.43	26	0.04	1.00	0.57
	14	5	0.36	0.86	45	0.04	1.00	0.14

Note: A minus (-) deviation (d) indicates the member is above the Target Line.

Table I lists quarterly deviations about the target line for personnel assigned to BSN 31080. Representative graphs of all BSNs used in the example work center are contained in Appendix E. The total training and qualification deviations about the target line for each BSN, in the work center, are summed and averaged using the following equation.

$$\text{Ave Dev (D)} = \frac{1}{n} \sum_{i=1}^{n} d$$

where:
- d = Deviation from the Target Line
- n = Billet Sample Size

The Average Deviations (D) for individual BSNs thus computed for the example work center are contained in Table II.

Table II: Work Center 220 Average Deviation

BILLET SEQUENCE NUMBER	RATE & RATING	AVERAGE DEVIATION (D)
31050	AE1	0.08
31060	AE2	0.12
31070	AE2	0.18
31080	AE3	0.29
31090	AE3	0.09
31100	AE3	0.22
31110	AEAN	0.36
31120	AEAN	0.37
31130	AEAN	0.43

It should be noted that the Average Deviations (D) shown in this table are all positive, and are therefore below the target line. This indicates that training for those individuals in Work Center 220 is deficient by the amount of the deviation. From this deviation in established

maintenance training/qualification requirements, it can be inferred that a deficiency exists in the squadron's overall maintenance capability. It is hypothesized that a correlation exists between the level of training and the ability of the squadron to carry out assigned mission tasks. Thus, it is theorized that a significant, positive Billet Average Deviation (D) for particular work center or the overall squadron, could effect its ability to perform assigned missions.

D. CHAPTER SUMMATION

This chapter has identified the steps required in computing the Effectiveness Model developed in this thesis. These steps are:

1. Determine each BSN incumbent's training and qualification percentage and his months onboard from the Maintenance Matrix and EDVR, respectfully.

2. Compute each incumbent's training and qualification deviation in relation to a predetermined goal.

3. Average the target line average deviations (d) for each BSN to produce a Billet Average Deviation (D).

It has been assumed that a meaningful relationship exists between the summation of Billet Average Deviations (D) throughout the maintenance departments and the maintenance capabilities of the squadrons identified. If

this hypothesis is correct, then a large Average Deviation (D) would indicate lower mission readiness relative to a squadron with a smaller Average Deviation. It should be noted that of the seven squadrons studied, one was recognized for excellence (awarded the Battle "E") during the reported period. This same squadron possessed one of the lowest aggregate training/qualification deviations (highest level of training) observed in the sample set.

Further emphasis of training and qualification deficiencies is accomplished through conversion of BSN Average Deviations (D) into dollars utilizing Billet Life Cycle Costs in Chapter 6.

VI. COST MODEL

Personnel costs currently constitute the major percentage of the actual costs of Navy operational systems. Salaries and related costs for personnel accounted for about 60% of the $156.1 billion spent on national defense in 1981 [Ref. 17]. For example, a cost analysis of the DD963 class destroyer showed that manning costs comprised 58% of the expected 20 year operational support costs [Ref. 18]. As training cost constitute a large portion of manning costs, a method which identifies the possible dollar value loss resulting from maintenance training deficiencies should be worthwhile.

It is recognized that other methods of assessing the impact of the training/qualification degradation estimated in Chapter 5 are available. Factors such as Mission Readiness and Casualty Reporting (CASREP) could have been correlated with Billet Average Deviation (D). However, Billet Life Cycle Cost was chosen for its modeling simplicity. Cost computations utilizing Billet Life Cycle costs follow.

A. ONE YEAR BILLET COST

The life cycle billet costs used in this thesis are the estimated average total cost over a fixed number of years of

manning a position with a given rating and paygrade. The assumption is made that life cycle costs for individual billets, by BSN, are related to the average estimated sea duty tour of the personnel holding the billets, i.e., the average sea tour for enlisted personnel in a Patrol Squadron is approximately 36 months, therefore squadron life cycle cost for the member is computed for three years [Ref. 19]. The first year billet costs are based on FY 81 Military Pay Rates. These costs includes the following.

1. Direct costs, including base pay, allowances, hazard pay, proficiency pay, and medical costs.

2. Training and retirement costs, which are amortized over the number of years personnel are expected to remain in service (based on historical continuation rates). These costs include liability annuities and reenlistment bonuses that are applicable for certain ratings.

3. Overhead (fixed) costs, which are associated with all personnel regardless of rating and paygrade (e.g., those incurred for maintaining medical and training facilities).

The life cycle billet cost does not include costs relating to non-military personal skill development (college courses), or external military tasks (compartment cleaning, mess duties, etc.). The billet costs used in this thesis are developed from the data contained in E. A. Koehler and R. F. Turney's report entitled, "Life Cycle Navy Enlisted Billet Costs - FY 1981", [Ref. 20].

B. DISCOUNT RATE COMPUTATION

The multiple year billet cost tables included in this thesis, [Appendix F], have been computed using a 10 percent discount rate. According to the Office of Management and Budget Circular A-76, the discount rate can be computed using the average interest rate of long term treasury notes during the previous 12 months [Ref. 21]. This equates to approximately a 10 percent discount rate for the period of this report.

EXAMPLE 3

$$S(n) = \left[1 - \left(\frac{1}{1 + r} \right)^{n} \right] \left[\left(\frac{1 + r}{r} \right) (x) \right]$$

where:

S = Billet cost
n = Number of years in billet life
r = Discount rate
x = Billet cost for the first year

An Aviation Electrician's Mate (AE), paygrade E-4, for a three year period would yield:

n = 3
r = .10
x = $18,018.00

$$S(n) = \left[1 - \left(\frac{1}{1 + .10} \right)^{3} \right] \left[\left(\frac{1 + .10}{.10} \right) (\$18,018.00) \right]$$

$$= [\ 1 - (\ .90909\ )^{3}\ ]\ \ [\ (\ 11\ )\ (\ \$18{,}018.00\ )\ ]$$

$$= [\ 1 - .75131\ ]\ \ [\ \$198{,}198.00\ ]$$

$$= \$49{,}288.91$$

One year cost figures do not reflect a discount or interest rate. Therefore, if the user requires application of a discount rate other than 10 percent for multiple year projections, the one year costs should be used as the base for such computations. For example, if no discount rate is to be applied and the billet costs for a 3 year period are desired, then the one year cost figure should be multiplied by 3. The resultant figure would be reflected in current dollars.

Table III: Billet Life Cycle Cost

RATING	PAY GRADE	YEARS One	Two	Three
AVIATION ELECTRICIAN'S MATE				
AE	E-2	16,368.00	31,248.00	44,775.27
AE	E-3	17,278.00	32,985.27	47,264.61
AE	E-4	18,018.00	34,398.00	49,288.91
AE	E-5	18,316.00	34,966.91	50,104.10
AE	E-6	22,859.00	43,639.91	62,531.64
AE	E-7	25,880.00	49,407.27	70,795.70
AE	E-8	28,233.00	53,899.36	77,232.42
AE	E-9	31,893.00	60,886.64	87,244.49

If a discount rate other than 10 percent needs to be applied, the formula identified in Example 3 can be used with one year cost figures. Table III compiles the Life Cycle Cost computed for the AE rating.

C. COST EFFECTIVENESS

One possible estimate of training cost effectiveness is derived through adjustment of the life cycle cost by the qualification deviation, resulting in a dollar value of training deficiency. That is, the Average Deviation (D), listed in Appendix G, is multiplied by the adjusted Three Year Billet Life Cycle Cost, contained in Appendix F, to produce the dollar value of training deviation for each billet. Table IV reflects this process for the example work center. It should be noted that Billet Sequence Numbers, (contained in Appendix G), having a negative (-) Average Deviation (D), would indicate a training/qualification level above the goal, and are therefore assigned a zero Dollar Value of Deficiency. The example work center, Table IV, contained no negative (-) Average Deviations (D).

Applying the methodology previously identified to each of the BSNs listed in the sample set (Appendix B), produces one measure of the total dollar value of training deficiency. The deviation to an "average" squadron was computed from the three year Billet Life Cycle Cost figures contained in Appendix G to be $1,436,234.00. The average

deviation over all the BSNs studied was 0.24. Thus, it is theorized that the "typical" maintenance technician is approximately 75% qualified, which equates to four maintenance technicians being required to accomplish the task of three. In our judgement this is not an unreasonable assumption considering the present condition of over manning in the maintenance departments of each of the seven squadrons studied.

Table IV: Dollar Value of Training Deficiency

BILLET SEQUENCE NUMBER	AVG DEV (D)		THREE YEAR LIFE CYCLE COST		DOLLAR VALUE OF DEFICIENCY
31050	.08	X	$62,531.64	=	$ 5,002.53
31060	.12	X	$50,104.10	=	$ 6,012.49
31070	.18	X	$50,104.10	=	$ 9,018.74
31080	.29	X	$49,288.91	=	$14,293.78
31090	.09	X	$49,288.91	=	$ 4,436.00
31100	.22	X	$49,288.91	=	$10,843.56
31110	.36	X	$47,264.61	=	$17,015.26
31120	.37	X	$47,264.61	=	$17,487.91
31130	.43	X	$47,264.61	=	$20,323.78
			TOTAL		$104,434.05

From the $1,436,234 Three Year Billet Life Cycle Cost, an "annual equilivant" can be derived. This estimated per

annum value of training deficiency equates to $525,028.16. Since the squadrons studied demonstrated similar cyclical variations of composite training/qualification deviation due to deployments and other factors, it is assumed that the per annum value of training deficiency could be multiplied by the number of squadrons studied. The resulting annual qualification/training deviation in dollars would then amount to $3,675,197.10 (7 X $525,028.16).

An argument can be made that "training costs", which are amortized over the number of years personnel are expected to remain in service (based on historical continuation rates), are only a small percentage of total Billet Life Cycle Cost, and therefore any deviation in training/qualification levels should only be applied to this small portion of aggregate Billet Life Cycle Cost. However, it is assumed that funding (life cycle cost) for a particular billet is provided to ensure that a specific mission/task is performed. If the individual is degraded in his ability to accomplish this mission/task, by a deficiency in training or qualification, then it is hypothesized that this measure is in some way related to maintenance training deficiencies. A better estimate of the cost of training inadequacies would assess costs in terms of squadron performance and readiness. Our measure assumes there is a relationship between: 1) our index of training deviation, 2) billet costs, and 3) the dollar costs to the Navy of maintenance training

deficiencies. Our measure of training inadequacy is, therefore, a "common-sense" approach which assumes that maintenance deficiency increases both as the cost to prepare the maintainer grows, and as the gap between what the maintainer is trained to do and the training required of him grows.

VII. ANALYSIS

Data utilized in this analysis were composed of information derived from the study of sixty Billet Sequence Numbers randomly generated and statistically proportioned by paygrade in each of seven Fixed Winged Patrol Squadrons for the period of one year. As mentioned earlier, one work center from among all the work centers analyzed within the maintenance department of the sample squadrons was used to illustrate the findings of the entire data set. The work center chosen (WC 220) is composed of one rate (AE) and one NEC (7181). The homogeneity of this medium sized work center tends to reduce the complexity of relating the information developed.

The essential elements of the analysis can be recreated for other work centers within the sample set, from information contained in the enclosed appendices. The methodology and models developed are equally applicable to all other maintenance work centers and activities. Additional information contained in the data base generated by this thesis resides on paper and is held by Commander Patrol Wing 10, Naval Air Station Moffett Field, California.

A. RECAPITULATION

Reexamination of the tenets and assumptions of this thesis are in order to better understand the ensuing analysis. Maintenance readiness has historically been a difficult indicator to weigh. The skill level matrices developed for Commander Patrol Wings U.S. Pacific Fleet, [Ref. 22], identified critical elements of training and qualifications required for maintenance personnel at the squadron level. The Maintenance Matrices, when coupled with the squadrons Manpower Authorization (MPA), formed a manpower rate and skill experience level identification management package. When onboard maintenance manpower resources and numerical weighting of the various manpower, training and qualification elements of the matrix are added, a true readiness scoring system is devised.

The data contained in the CPWP Maintenance Matrix have been "in the fleet" long enough to evolve into a meaningful tool. The categories and weights assigned within the Matrix are therefore assumed to be both relevant and consistent with the maintenance requirements of CPWP. However, the CPWP Skill Level Matrix contained numerous errors and inconsistencies for the period of this study, which necessitated the formulation of a new maintenance matrix, (Appendix A). The new maintenance matrix was used to identify the total training/qualification requirements of each billet within the maintenance department. The

effectiveness model in turn compared the individual maintenance technician's training/qualification level to the ideal level delineated in the Maintenance Matrix, resulting in a training/qualification deviation. This deviation was then converted into dollars and cents to illustrate the impact of the training/qualification deficiency in lieu of less obvious readiness indicators.

B. DEVIATION BY SENIORITY

Analysis of the Efficiency Model indicated the level of training deviation from the target line for senior enlisted personnel was significantly less than that determined for the more junior personnel in the same rating and NEC. Intuitively, more senior personnel should be better qualified due to their experience and familiarity with the maintenance environment. The significance of the observation becomes apparent when the amount of deviation from the "ideal" is expressed in dollars. Referring to Table IV, the training/qualification deviation for BSN 31050 goes from .08 for the most senior technician to .43 for the most junior. Therefore, it might be argued that the greatest return on training would be realized in the more junior paygrades (i.e., E-5 and below).

C. TRAINING

The method used in computing the training/qualification deviation up to this point has consisted of identifying the

total level of training expected of a maintenance technician completing the training pipeline. This total (Section 2 of Figure 4) served as the month zero starting point for the target line. From the intercept, it sloped upward to 100% at the 18th month onboard. Figure 5 illustrated this point for BSN 31080, however, there are other factors which should be considered in establishing the starting point of the target line. Section 1 of Figure 4 indicates that the BSN 31080 incumbent should be an AE3 with an NEC of 7181. When this situation exists the incumbent receives 3 additional points (RR = 2 points; NEC = 1 point). These 3 points, when added to the 5 formal training points (Section 2) define a more realistic assessment of the technicians true starting (month 0) level of qualification.

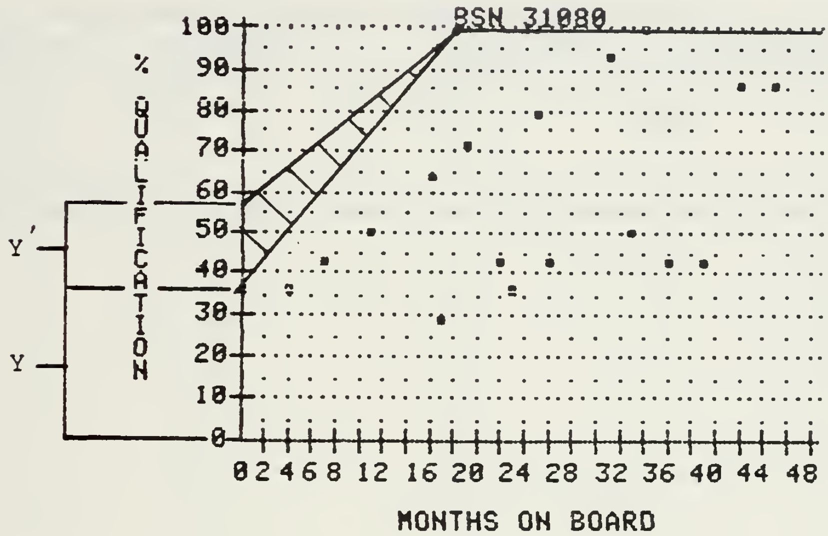
The data in Appendix D illustrate that the Training/Qualification Deviation (d) is significant throughout the sample data set. The "Y" intercept of the target line used in computation of the deviations (d) in Appendix D consisted exclusively of formal enroute training (Section Two of the Maintenance Matrix). Appendix H is provided to illustrate the impact of Rate, Rating and NEC, in addition to formal enroute training, upon the training/qualification deviation (d). For example, the summation and averaging of the training/qualification deviations (d) for BSN 31080 utilizing only Section Two data resulted in a Billet Average Deviation (D) of .30. The

Billet Average Deviation (D) for BSN 31080, using APPENDIX H (Rate, Rating, NEC, plus formal enroute training) results in a deviation (D) of .34.

Inclusion of manning requirements data (Section One of the Maintenance Matrix) explained above results in an upward shift of the target line. This new target line is shown as line (Y') in Figure 9. The Billet Average Deviations (D) computed using this revised method should have remained the same if manning requirements were properly met. However, since a difference of .04 exists between the two means of computing Billet Average Deviation (D), a deficiency in some combination of Rate, Rating and NEC must exist.

Unfortunately, the work center chosen for the example throughout this study (WC 220) contains only one (7181) NEC. The range of deviation is increased in work centers requiring numerous NECs to perform the work centers mission (i.e., WC 210) when Rate, Rating and NECs are added to the deviation determination criteria. The importance of the proper Rate, Rating and NEC mix cannot be over emphasized as they have the potential to effect the activities maintenance capabilities. Any deviation below the target line may not necessarily be only training related when manning factors such as Rate, Rating and NEC are used in the formulation of the target line.

Figure 9: RATE, RATING AND NEC DEVIATION FACTORS



D. MANNING AND TRAINING CONSIDERATIONS

Table V is provided to illustrate further the impact of manning and training deficiencies in the example billet. The table is divided into two sections. Section (1) identifies the basic manning consideration, (Rate, Rating and NEC), taken from the MPA. Section (2) identifies all the enroute "pipeline" training required by the NTP for the billet. Sections (1) and (2) also correspond to identical sections in the Maintenance Matrix (Appendix A). Using truth-table format, a "1" was assigned if the sample maintenance technician satisfied the requirement (true), and a "0" if the requirement was not satisfied (false).

Table V: Manning and Training for BSN 31080

SECTION 1 (MANNING)		SECTION 2 (TRAINING)			
RATE & RATING	NEC	6515	524N	4176	
1	1	1	0	0	
1	1	1	1	1	*
0	0	0	1	0	
1	1	0	1	0	
1	1	1	0	0	
1	1	0	0	0	
1	1	1	1	1	*
1	1	0	1	0	
1	1	1	1	0	
1	0	0	1	1	
1	1	1	1	0	
1	0	0	1	0	
1	1	0	1	1	
1	1	1	1	1	*
1	0	0	1	1	
1	0	1	0	1	
1	0	0	1	0	
1	1	0	1	1	

Note: A "1" means the technician fulfilled the requirement, a "0" means the technician did <u>not</u> fulfill the requirement.

6515 = Aviation Electrician's Mate "A" School
524N = NAMTD Electric Instrument School
4176 = NAMTD Avionic Corrosion School
* = All manning & training requirements completed

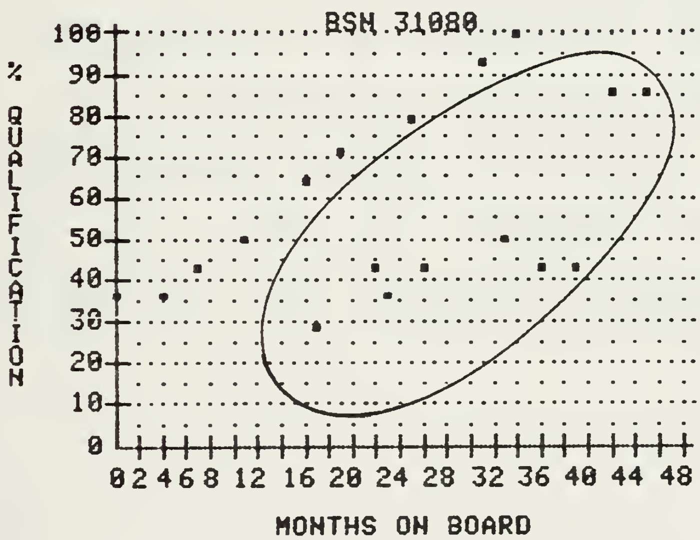
From Table V it can be seen that only 17% of the billet (31080) incumbents possessed all of the manning and training requirements outlined in Section 1 and 2 of the Maintenance

Matrix (*). Further, 94% of the maintenance technicians possessed the correct rate and rating. That is, 94% were AE-3's in an AE-3 billet. Additionally, 67% of the personnel have the correct NEC (7181) which indicates they have either graduated from NAMTD, Electric Instrument School (524N) or have been awarded the NEC through completion of OJT. A total of 78% of the sample have graduated from the NAMTD Electric Instrument School (524N) which requires a NEC of 7181 be awarded. In as much as 78% of the sample have graduated from the school, and only 67% of the personnel have the NEC, poor manpower administrative documentation practices are suspected. This would result in training funds expended without the person being identified for possible future assignment in the field for which he was trained.

It can be seen from the information contained in Table V that 44% of the Aviation Electrician's Mates were Avionics Corrosion Control (4176) and "A" school (6515) graduates. One would expect the percentage of NAMTD Electric Instrument school (524N) graduates also to be 44%, as all three courses are required by the Fleet Readiness Aviation Maintenance Personnel Training Program (FRAMP) course syllabus, prior to squadron check-in. However, this is not the case as a higher percentage (78%) of the sample were NAMTD Electric Instrument school (524N) graduates. Analysis of the data indicated the billet incumbents completing only 524N were

non-designated airmen at squadron check-in. Non-designated airmen do not attend the training pipeline required for the billet. These personnel are circled on the graph in Figure 10 and explain the two distinct groupings of personnel common to many of the more junior maintenance department BSN's. It is hypothesized these personnel, with larger training/qualification deviations, do not contribute as much toward squadron mission accomplishment as they would if fully trained.

Figure 10: FACTORS OF DEVIATION



E. TRAINING CORRELATION

Commander Patrol Wing Ten (CPW-10) directed a study of maintenance training effectiveness which began in mid 1982. The context of the study was formal "open book" trouble

shooting of system malfunctions applicable to the rate and rating of the technicians being tested. The tests where approximately 50 questions in length, requiring up to five hours to complete. The actual tests have been administered to one VP squadron at the time of this writing (September 1983), and validation of these tests were conducted. The results of these tests were made available to the thesis writers, however, only 18 personnel taking the test were also contained in the random sample data base compiled. The correlation between the technicians test scores and level of training/qualification in the study appeared significant. However, the sample size was too small in each of the maintenance work centers to be classified "statistically" significant. It is suggested that follow-on thesis research examine the relationship between the CPW-10 maintenance testing, and the level of personal training and qualification when the test results are obtained from more activities.

VIII. RECOMMENDATION

While researching the information for this thesis, it became clear that: Maintenance Readiness reporting is adversely affected by not having the right people in the right job, at the right time. Every effort must be made to ensure proper utilization of personnel resources within the squadron. The Maintenance Matrix can serve as an important tool in facilitating communication between the Maintenance Department and the Administrative Department. Through the combined efforts of these two departments, maximum utilization of squadron personnel resources is possible.

A. MANPOWER MANAGEMENT POLICIES

OPNAVINST 1000.16E, [Ref. 23], delineates the "Total Force Manpower Plan" at all levels of the chain of command. However, implementation of the policy guidelines contained in this reference are sometimes open to interpretation at the activity level which results in confusing and sometimes contradictory manpower management policies. The overall program established by COMPATWINGTENINST. 5320.2, Appendix I, is example of a simple, yet workable, Manpower Management program. The policies and procedure contained in Appendix I are recommended in lieu of possibly less beneficial locally developed procedures.

B. PROCEDURES TO INCREASE EFFECTIVE READINESS

Examination of Appendix E reveals that the 18 month qualification period, as shown by the "Target Line", is generally unrealistic due to the majority of the personnel fall below the line at any given point in time. This indicates the squadrons do not possess the training resources required to qualify their personnel in a timely manner. If 18 months is unrealistic, then three possible options are:

1. Increase the Qualification Time Period

An increase of the training/qualification time period, to say 24 months, would improve the squadron's "reported" efficiency but would have little positive impact on the level of individual training/qualification. The only advantage to increasing the time period would be in giving the technicians a more realistic window to attain the target goal each quarter, resulting in higher morale thus increasing productivity.

2. Provide Additional Training Resources

One training program alternative to increase training/qualification effectiveness is to fund additional billets in each of the squadrons to assist in the administration and implementation of a standardized maintenance training program.

3. Increase Pipeline Training

Another alternative is to increase pipeline training for incoming maintenance personnel thus reducing the amount of additional training/qualification necessary in the squadron. The increase in pipeline training would have a two fold advantage: a) The maintenance personnel would check onboard more highly qualified, and b) The rate of attainment of additional squadron qualifications would be more realistic, due to the transfer of OJT/PQS training to the training pipeline and the concomitant decrease in squadron level training requirements. Further, such a program would; 1) Require fewer billets than placing the instructors in the squadron, and 2) Result in a more "standardized" training program. The hypothesized justification for the increased funding required to obtain additional training billets is the 3 year qualification deviation cost computed at $10,053,638.00 for the seven study squadrons.

Regardless of the recommendations offered, the long term effect of enhanced training will drive the qualification deviation cost towards zero. The net effect of this reduction will result in a higher level of maintenance training, thus increased efficiency while holding fixed Billet Life Cycle Costs level and increasing the ability of the squadrons to carry out their assigned mission tasks. Operational responsibilities can only be executed with aircraft available for flight. Aircraft are only available

for flight, over the long term, when they are "Mission Capable", and mission capable aircraft require properly trained, qualified and motivated technicians.

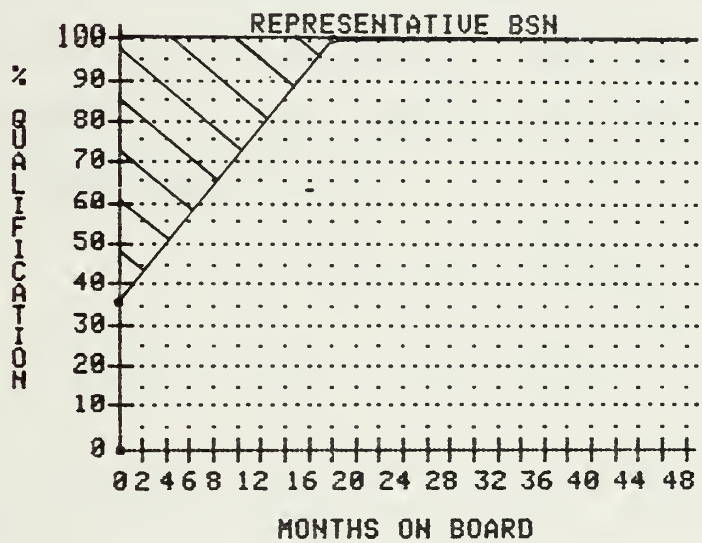
C. READINESS POLICY CONSIDERATIONS

When implementing a Skill Level Maintenance Matrix for an activity, some thought should be given to the weighting assigned to the various elements of the Matrix. Each element should be weighted according to its impact on the activity (Branch, Division, Department, etc.), and not the difficulty of achieving the goal defined by the element. Further, the method of computing the percent of qualification/training at any given point in time is also important. Consider the case where a technician checks onboard an activity utilizing a newly implemented Skill Level Maintenance Matrix. If the activity simply verifies the qualification/training level of the member at (X)% out of 100% at month 0 onboard, then the new technician begins a new assignment "behind the power curve". This method of reporting the maintenance readiness tends to understate the actual training/qualification percentage by a factor equal to the shaded area above the derived target line (Figure 11).

Due to the understatement mentioned above, support for such a reporting system is degraded, resulting in reduced overall activity support for training. For example, the percent of training/qualification derived for a work center

in this study was computed at 68% using a straight 100% qualification level irrespective of the members time onboard. Using the point slope method as defined in Chapter 5, resulted in a 88% qualification.

Figure 11: TRAINING/QUALIFICATION UNDERSTATEMENT



Obviously, the work center in the example was not 20% more qualified. However, the members of the work center were closer to their collective goal under the point slope method, and therefore would probably be more inclined to support this program.

D. THE MAINTENANCE MATRIX CONCEPT

The Maintenance Matrix concept contained in Appendix A is applicable to all communities throughout the fleet. The matrix serves to illustrate the training and qualification requirements of an activity through all levels of the organization, and is a logical extension (subset) of the Manpower Management Plan (Appendix I). Application of the Matrix concept is limited only by the imagination. Adoption by all communities is recommended. Additional research on the relationship of the Matrix to other measures of readiness is also recommended.

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APPENDIX A

MAINTENANCE MATRIX

WORK CENTER CPO
MAINTENANCE DIVISION CHIEFS

BSN	RR	NEC	(#)	2Z	3L	1102	4141	I PT
POINTS	02	01		01	01	02	03	
21050	E8	0000	(1)					
	--	--		--	--	--	--	9
37050	E8	0000	(1)					
	--	--		--	--	--	--	9
29050	E8	0000	(1)					
	--	--		--	--	--	--	9
SUBSECTION		1		4	4	2	2	

LEGEND: 2Z = WORK CENTER SUPERVISOR PQS
3L = MAINTENANCE CONTROL SUPERVISOR PQS
1102 = P-3 SUPERVISOR SCHOOL
4141 = LMET SCHOOL

WORK CENTER 020
MAINTENANCE/PRODUCTION CONTROL

BSN	RR	NEC	3I	3L	3K	3H	0036	6528	1102	3205	I PT
POINTS	02		01	02	01	02	03	02	04	02	
16050	E9	NA	NA	--	--	NA	--	NA	--	NA	12
16060	E8	NA	NA	--	--	NA	--	NA	--	NA	12
16070	E7	NA	NA	--	--	NA	--	NA	--	NA	12
16150	AZ1	NA	--	--	--	--	--	--	--	--	19
17050	AZ2	NA	--	NA	--	--	NA	--	NA	--	10
16160	AZ2	NA	--	NA	--	--	NA	--	NA	--	10
16170	AZ3	NA	--	NA	--	--	NA	--	NA	--	10
16180	AZ3	NA	--	NA	--	--	NA	--	NA	--	10
16190	AZAN	NA	--	NA	--	NA	NA	--	NA	NA	06
16200	AZAN	NA	--	NA	--	NA	NA	--	NA	NA	06
SECTION	1	1	4	4	4	4	2	2	2	2	

LEGEND: 3I = MAINTENANCE ADMIN WORKER PQS
3L = MAINTENANCE CONTROL SUPERVISOR PQS
3K = MAINTENANCE CONTROL NON-SUPERVISOR PQS
3H = LOGS/RECORDS MANAGER PQS
0036 = LMET SCHOOL
6528 = AZ "A" SCHOOL
1102 = P-3 SUPERVISOR SCHOOL
3205 = LOGS/RECORDS MANAGERS SCHOOL

WORK CENTER 040
QUALITY ASSURANCE
(PAGE-1)

BSN	RR	NEC	3D	3C	2X	3J	3G	2V	2U	1P	1S	2I	KT	3206	4176
POINTS	02	01	03	02	01	02	01	02	01	04	04	04	03	02	02
18050	AXCS	N/A	--	--	NA	NA	NA	--	NA	NA	NA	NA	--	--	--
18060	AD1	8319	NA	--	NA	NA	NA	--	--	--	--	NA	--	--	--
18070	AE1	7181	NA	--	NA	NA	NA	--	--	--	NA	NA	--	--	--
18080	AME1	8319	NA	--	NA	NA	NA	--	--	NA	--	NA	--	--	--
18090	AMS1	8319	NA	--	NA	NA	NA	--	--	NA	--	NA	--	--	--
18100	AT1	6586	NA	--	NA	NA	NA	--	--	NA	NA	--	--	--	--
18200	AO1	6804	NA	--	NA	NA	NA	--	--	NA	NA	--	--	--	--
18210	AZ3	N/A	NA	NA	--	NA	--	NA	--	NA	NA	NA	NA	NA	NA
18250	AZ1	6313	NA	NA	--	--	--	NA	--	NA	NA	NA	NA	NA	NA
SECTION	1	1	4	4	4	4	4	3	3	3	3	3	4	2	2

LEGEND:
3D = QA SUPERVISOR PQS
3C = QA NON-SUPERVISOR PQS
2X = W/C NON-SUPERVISOR PQS
3J = DATA ANALYST PQS
3G = TECH. LIBRARIAN PQS
2V = AUX. POWER UNIT OPERATOR PQS
2U = WING WALK/BRAKE RIDE PQS
1P = PROPULSION MECH. PQS
1S = UTILITY/ENVIRON TECH. PQS
2I = WEAPONS SYS. TECH PQS
KT = DESIGNATED QAR
4176 = AVIONICS CORROSION SCHOOL
3206 = QA ADMIN SCHOOL

WORK CENTER 040
QUALITY ASSURANCE
(PAGE-2)

BSN	RR	NEC	3205	6528	3611	I PT
POINTS	02	01	02	02	02	
18050	AXCS	6583	NA	NA	NA	16
18060	AD1	8319	NA	NA	NA	23
18070	AE1	7181	NA	NA	NA	19
18080	AME1	8319	NA	NA	NA	23
18090	AMS1	8319	NA	NA	NA	23
18100	AT1	6586	NA	NA	NA	19
18200	AO1	6804	NA	NA	NA	19
18210	AZ3	N/A	--	--	NA	9
18250	AZ1	6313	--	--	--	14
SECTION			2	2	2	

LEGEND: 6528 = AZ "A" SCHOOL   3611 = DATA ANALYST SCHOOL
3205 = TECH. PUB. LIBRARIAN SCH

WORK CENTER 050
MATERIAL CONTROL

BSN	RR	NEC	BC	ND	3E	3F	6522	0001	0003	I PT
POINTS	02	N/A	01	01	01	01	02	02	02	
19050	AK1	0000	--	--	--	--	--	--	--	12
19060	AK2	0000	--	--	--	--	--	--	--	12
19070	AK2	0000	--	--	--	--	--	--	--	12
19080	AK3	0000	--	--	--	NA	--	NA	--	09
19100	AKAN	0000	NA	--	--	NA	--	NA	--	08
19110	AKAN	0000	NA	--	--	NA	--	NA	--	08
19500	AK2	0000	--	--	--	--	--	--	--	12
19510	AN	0000	NA	--	--	NA	--	NA	NA	05
19520	AN	0000	NA	--	--	NA	--	NA	NA	05
19530	AN	0000	NA	--	--	NA	--	NA	NA	05
SECTION	1	1	2	2	4	4	2	2	2	

LEGEND: BC = 20K FORKLIFT ND = 6K FORKLIFT
3E = MAT'L CONT. NON-SUP. PQS EF = MAT'L CONT. SUPERVISOR PQS
6522 = AK 'A' SCHOOL
0001 = IMRL MANAGER SCHOOL
0003 = MATERIAL CONTROL ADMIN SCHOOL

WORK CENTER 110
POWER PLANTS

BSN	RR	NEC	#	BC	1P	2U	2V	2W	2Z	2X	2Y	LP	3533	8407	I PT
POINTS	02	01	#	01	03	01	01	01	01	01	01	02	02	02	
22050	ADC	8319	(1)												
	--	--		--	--	--	--	--	--	--	--	--	--	--	19
22060	AD1	8319	(2)												
	--	--		--	--	--	--	--	--	--	--	--	--	--	19
22080	AD2	8319	(3)												
	--	--		--	--	--	--	--	--	--	--	--	--	--	19
22110	AD3	8319	(4)												
	--	--		--	--	--	--	NA	NA	--	NA	NA	--	NA	12
22160	ADAN	8319	(4)												
	--	--		--	--	--	--	NA	NA	--	NA	NA	--	NA	12
SECTION	1	1		2	3	3	3	3	4	4	4	4	2	2	

LEGEND
BC = 20K FORKLIFT
1P = PROPULSION MECH. PQS
2U = WING WALK/BRAKE RIDE PQS
2V = AUX POWER OPERATOR PQS
2W = ENGINE OPERATOR PQS
2Z = W/C SUPERVISOR PQS
2X = WC NON-SUPERVISOR PQS
2Y = COLLATERAL DUTY INSPECTOR (CDI) PQS
LP = DESIGNATED CDI
3533 = T-56-10/14 SCHOOL
8407 = WORK CENTER ADMIN SCHOOL

WORK CENTER 120 (120 A/B)
AIRFRAMES BRANCH
(PAGE-1)

BSN	RR	NEC	(#)	1K	1M	1Q	2U	2V	2Z	2X	2Y	LP	I PT
POINTS	02	01		01	01	03	01	01	01	01	01	02	
23050	AMSC	8319	(1)										
	--	--		--	--	--	--	--	--	--	--	--	22
23060	AMH1	8319	(1)										
	--	--		--	--	--	--	--	--	--	--	--	22
23070	AMH2	8319	(2)										
	--	--		--	--	--	--	--	--	--	--	--	22
23090	AMH3	8319	(2)										
	--	--		--	--	--	--	--	NA	--	NA	NA	16
23100	AMHAN	8319	(8)										
	--	--		--	--	--	--	--	NA	--	NA	NA	16
23160	AMS1	8319	(1)										
	--	--		--	--	--	--	--	--	--	--	--	22
23170	AMS2	8319	(1)										
	--	--		--	--	--	--	--	--	--	--	--	22
23190	AMS3	8319	(2)										
	--	--		--	--	--	--	--	NA	--	NA	NA	16
23210	AMSAN	8319	(2)										
	--	--		--	--	--	--	--	NA	--	NA	NA	16
SECTION	1	1		2	2	3	3	3	4	4	4	4	

LEGEND: 1K = AHT-63 OPER. PQS 1M = HYD. JACK OPERATOR PQS
1Q = HYD./STRUCTURES TECH. PQS 2U = WING WALK/BRAKE RIDE PQS
2V = AUX. POWER OPER. PQS 2Z = W/C SUPERVISOR PQS
2X = W/C NON-SUPER. PQS 2Y = CDI PQS
LP = DESIGNATED CDI

WORK CENTER 120 (120 A/B)
AIRFRAMES BRANCH
(PAGE-2)

BSN	RR	NEC	(#)	6518 6517	3177	524M 201A	8407	I PT
POINTS	02	01		02 X 02	01	02 X 01	02	
23050	AMSC	8319	(1)	--	--	--	--	22
23060	AMH1	8319	(1)	--	--	--	--	22
23070	AMH2	8319	(2)	--	--	--	--	22
23090	AMH3	8319	(2)	--	--	--	NA	16
23100	AMHAN	8319	(0)	--	--	--	NA	16
23160	AMS1	8319	(1)	--	--	--	--	22
23170	AMS2	8319	(1)	--	--	--	--	22
23190	AMS3	8319	(2)	--	--	--	NA	16
23210	AMSAN	8319	(2)	--	--	--	NA	16
SECTION	1	1		2	2	2	2	

LEGEND: 6518 = AMS/AMH "A" SCHOOL 3177 = CORROSION CONTROL SCHOOL
524M = HYD/STRUCTURES SCHOOL 210A = NON-DESIGNATED AIRMAN SCHOOL
8407 = WORK CENTER ADMIN SCHOOL

WORK CENTER 121 (120 C)
CORROSION CONTROL
(PAGE 1)

BSN	RR	NEC	(#)	MO	4J	2U	2V	2Z	2X	2Y	LP	6518 *OR* 201A	3177
POINTS	02	01		01	03	01	01	01	01	01	02	02 ** 01	02
24050	AMS1	8319	(1)										
	--	--		--	--	--	--	--	--	--	--	--	--
24060	AMS2	8319	(1)										
	--	--		--	--	--	--	--	--	--	--	--	--
24070	AMS3	8319	(2)										
	--	--		--	--	--	--	NA	--	NA	NA	--	--
24090	AMSAN	8319	(2)										
	--	--		--	--	--	--	NA	--	NA	NA	--	--
SECTION	1	1		2	3	3	3	4	4	4	4	2	2

LEGEND: MO = VACU-BLAST HONER LICENCE 4J = CORROSION PREVENTION TECH. PQS
2U = WING WALK/BRAKE RIDE PQS 2V = AUX. POWER OPERATOR PQS
2Z = W/C SUPERVISOR PQS 2X = W/C NON-SUPERVISOR PQS
2Y = CDI PQS LP = DESIGNATED CDI
6518 = AMS 'A' SCHOOL 201A = NON-DESIGNATED AIRMAN
3177 = CORROSION CONTROL SCHOOL

WORK CENTER 121 (120 C)
CORROSION CONTROL
PAGE 2

BSN	RR	NEC (#)	0330	0370	8407	I PT
POINTS			02	02	02	
24050	AMS1	8319 (1)	--	--	--	24
24060	AMS2	8319 (1)	--	--	--	24
24070	AMS3	8319 (2)	--	--	NA	18
24090	AMSAN	8319 (2)	--	--	NA	18
SECTION			2	2	2	

LEGEND: 0330 = NARF CORR. CONT. SCHOOL 0370 = NARF PAINT AND MARKING SCHOOL
8407 = W/C ADMIN SCHOOL

WORK CENTER 130
AV EQUIPMENT AND SAFTEY/SURVIVAL

BSN	RR	NEC	(#)	1S	1T	2U	2V	2Z	2X	2Y	LP	6519 *OR* 6516	8407	524L	I PT
POINTS	02	01		02	02	01	01	01	01	01	02	02	02	03	
25050	PR2	0000	(1)												
	--	--		NA	--	--	--	--	--	--	--	--	--	NA	15
25060	PR3	0000	(1)												
	--	--		NA	--	--	--	NA	--	--	--	--	NA	NA	12
25070	PRAN	0000	(1)												
	--	--		NA	--	--	--	NA	--	NA	NA	--	NA	NA	09
26050	AME1	8319	(1)												
	--	--		--	NA	--	--	--	--	--	--	--	--	--	19
26060	AME2	8319	(1)												
	--	--		--	NA	--	--	NA	--	--	--	--	NA	--	16
26070	AME3	8319	(1)												
	--	--		--	NA	--	--	NA	--	--	--	--	NA	--	16
SECTION 1		1		3	3	3	3	4	4	4	4	2	2	2	

LEGEND: 1S = UTIL/ENVIRON SYS TECH PQS 1T = SAFETY/SURVIVAL TECH PQS
2U = WING WALK/BRAKE RIDE PQS 2V = AUX POWER OPERATOR PQS
2Z = W/C SUPERVISOR PQS 2X = W/C NON-SUPERVISOR PQS
2Y = CDI PQS LP = DESIGNATED CDI
6519 = PR "A" SCHOOL 6516 = AME "A" SCHOOL
8407 = SUPERVISOR SCHOOL 524L = ENVIRON.SYS MAINT SCHOOL

WORK CENTER 210
ELECTRONIC BRANCH
(PAGE 1)

BSN	RR	NEC	(#)	2E	2H	2I	2U	2V	2Z	2X	2Y	LP	6239	6244	4176
POINTS	02	01		02	01	02	01	01	01	01	01	02	03	02	01
30050	AT1	6586	(1)												
	--	--		NA	--	--	--	--	--	--	--	--	--	--	--
30065	AT1	0000	(1) ¥												
	--	--		NA	--	--	--	--	--	--	--	--	--	--	--
30075	AT2	0000	(1) ¥												
	--	--		NA	--	--	--	--	--	--	--	--	--	--	--
30080	AT2	6586	(1)												
	--	--		NA	--	--	--	--	--	--	--	--	--	--	--
30090	AT2	6586	(1) ¥												
	--	--		NA	--	--	--	--	--	--	--	--	--	--	--
30100	AT3	6586	(1)												
	--	--		NA	--	--	--	--	--	--	--	NA	--	--	--
30110	AT3	6672	(1)												
	--	--		--	--	NA	--	--	NA	--	NA	NA	--	--	--
30120	ATAN	6672	(2)												
	--	--		--	--	NA	--	--	NA	--	NA	NA	--	--	--
SECTION	1	1		3	3	3	3	3	4	4	4	4	2	2	2

LEGEND: ¥ = SPECIAL MISSION SQUADRONS 2E = NAV/COM TECH PQS
2H = DATA HANDLING TECH PQS 2I = WST/IFT TECH PQS
2U = WING WALK/BRAKE RIDE PQS 2V = AUX POWER OPERATOR PQS
2Z = W/C SUPERVISOR PQS 2X = W/C NON-SUPERVISOR PQS
2Y = CDI PQS LP = DESIGNATED CDI
6239 = AT "A" SCHOOL 6244 = AT "AFTA" SCHOOL
4176 = AVIONICS CORROSION CONTROL SCHOOL

WORK CENTER 210
ELECTRONIC BRANCH
(PAGE 2)

BSN	RR	NEC (#)	462L	523N	8407	I PT
POINTS			03	03	02	
30050	AT1	6586 (1)	--	NA	--	24
30065	AT1	0000 (1) *	--	NA	--	23
30075	AT2	0000 (1) *	--	NA	--	23
30080	AT2	6586 (1)	--	NA	--	24
30090	AT2	6586 (1) *	--	NA	--	24
30100	AT3	6586 (1)	--	NA	NA	20
30110	AT3	6672 (1)	NA	--	NA	18
30120	ATAN	6672 (2)	NA	--	NA	18
SECTION			2	2	2	

LEGEND: 462L = WEAPON SYS MAINT. SCHOOL 523N = COM/NAV MAINT. SCHOOL
8407 = W/C ADMIN SCHOOL

WORK CENTER 220
ELECTRIC/INSTRUMENT

BSN	RR	NEC	(#)	1R	2U	2V	2Z	2X	2Y	LP	6515	524N XORX 201A	4176	8407	I PT
POINTS	02	01		03	01	01	01	01	01	02	02	2X1	02	01	
31050	AE1	7181	(1)												
	--	--		--	--	--	--	--	--	--	--	--	--	--	20
31060	AE2	7181	(2)												
	--	--		--	--	--	--	--	--	--	--	--	--	--	20
31080	AE3	7181	(3)												
	--	--		--	--	--	NA	--	NA	NA	--	--	--	NA	14
31110	AEAN	7181	(3)												
	--	--		--	--	--	NA	--	NA	NA	--	--	--	NA	14
SECTION	1	1		3	3	3	4	4	4	4	2	2	2	2	

LEGEND: 1R = ELECT. MAINT. TECH PQS 2U = WING WALK/BRAKE RIDER PQS
2V = AUX POWER OPERATOR PQS 2Z = W/C SUPERVISOR PQS
2X = W/C NON-SUPERVISOR PQS 2Y = CDI PQS
LP = DESIGNATED CDI 6515 = AE "A" SCHOOL
524N = ELECT/INST. MAINT SCHOOL 4176 = AVIONICS CORROSION CONTROL SCHOOL
8407 = W/C ADMIN SCHOOL

WORK CENTER 230
ARMAMENT/ORDNANCE

BSN	RR	NEC (#)	2K XX 1Z	2U	2V	2Z	2X	2Y	LP	6506	524Z XORX 201A	8407	3177	I PT
POINTS	02	01	02	01	01	01	01	01	02	02	02	02	01	
32050	A01	6804 (1)												
	--	--	--	--	--	--	--	--	--	--	--	--	--	19
32060	A02	6804 (1)												
	--	--	--	--	--	--	--	--	--	--	--	--	--	19
32070	A03	6804 (1)												
	--	--	--	--	--	NA	--	NA	NA	--	--	NA	--	13
32080	ACAN	6804 (2)												
	--	--	--	--	--	NA	--	NA	NA	--	--	NA	--	13
SECTION	1	1	3	3	3	4	4	4	4	2	2	2	2	

LEGEND:
- 2K = GROUND ORDNANCE PQS
- 2U = WING WALK/BRAKE RIDE PQS
- 2V = AUX POWER OPERATOR PQS
- 2Z = W/C SUPERVISOR PQS
- 2X = W/C NON-SUPERVISOR PQS
- 2Y = CDI PQS
- LP = DESIGNATED CDI
- 6506 = AO "A" SCHOOL
- 524Z = ARMAMENT SYS MAINT SCHOOL
- 8407 = W/C ADMIN SCHOOL
- 3177 = CORROSION CONTROL SCHOOL

WORK CENTER 270
ANTI SUB WARFARE BRANCH
(PAGE 1)

BSN	RR	NEC	(#)	2F	2G	2H	2I	2U	2V	2Z	2X	2Y	LP	6241
POINTS	02	01		02	02	01	02	01	01	01	01	01	02	03
35050	AXC	6586	(1)											
	--	--		NA	NA	--	--	--	--	--	--	--	--	--
35060	AX2	0000	(1) X											
	--	NA		NA	NA	--	--	--	--	--	--	--	--	--
35070	AX1	6585	(1)											
	--	--		--	NA	--	NA	--	--	--	--	--	--	--
35080	AX2	6586	(1)											
	--	--		NA	NA	--	--	--	--	--	--	--	--	--
35090	AX3	6586	(2)											
	--	--		NA	NA	--	--	--	--	NA	--	NA	NA	--
35105	AXAN	6583	(1) X											
	--	--		NA	--	--	NA	--	--	NA	--	NA	NA	--
35110	AXAN	6583	(1)											
	--	--		NA	--	--	NA	--	--	NA	--	NA	NA	--
35130	AXAN	6585	(1)											
	--	--		--	NA	--	NA	--	--	NA	--	NA	NA	--
SECTION	1	1		3	3	3	3	3	3	4	4	4	4	2

LEGEND: X = SPECIAL MISSION SQUADRON
2F = SS-3 TECH PQS
2G = SS-1/2 TECH PQS
2H = DATA HANDELING PQS
2I = WST/IFT TECH PQS
2U = WING WALK/BRAKE RIDER PQS
2V = AUX POWER OPERATOR PQS
2Z = W/C SUPERVISOR PQS
2X = W/C NON-SUPERVISOR PQS
2Y = CDI PQS
LP = DESIGNATED CDI
6241 = AX "A" SCHOOL

WORK CENTER 270
ANTI SUB WARFARE BRANCH
(PAGE 2)

BSN	RR	NEC (#)		6246	4176	462L	523R	523P	8407	I PT
POINTS				02	01	03	03	03	02	
35050	AXC	6586 (1)		--	--	--	NA	NA	--	24
35060	AX2	0000 (1)	※	--	--	NA	NA	--	--	--
35070	AX1	6585 (1)		--	--	NA	NA	--	--	24
35080	AX2	6586 (1)		--	--	--	NA	NA	--	24
35090	AX3	6586 (2)		--	--	--	NA	NA	NA	18
35105	AXAN	6583 (1)	※	--	--	--	--	NA	NA	18
35110	AXAN	6583 (1)		--	--	NA	--	NA	NA	18
35130	AXAN	6585 (1)		--	--	NA	NA	--	NA	18
SECTION				2	2	2	2	2	2	

LEGEND: ※ = SPECIAL MISSION SQD. 6246 = AX "AFTA" SCHOOL
4176 = AVIONICS CORR CONT. SCH 462L = WEAPONS SYS MAINT SCHOOL
523R = SS-1/2 MAINT SCHOOL 523P = SS-3 MAINT SCHOOL
8407 = W/C ADMIN SCHOOL

WORK CENTER 310
PLANE CAPTAIN/AIRCRAFT HANDLERS

BSN	RR	NEC	(#)	10	2Z	2X	6527	201A	8407	I PT
POINTS	02	NA		03	01	01	02	01	02	
39000	ABH1	0000	(1)							
	--	NA		--	--	--	--	NA	--	11
39060	ABH3	0000	(1)							
	--	NA		--	--	--	--	NA	NA	09
39080	AN	0000	(8)							
	--	NA		--	NA	--	NA	--	NA	07
SECTION	1	1		3	4	4	2	2	2	

LEGEND: 10 = AIRCRAFT HANDLER PQS   2Z = W/C SUPERVISOR PQS
2X = W/C NON-SUPERVISOR PQS   6527 = ABH "A" SCHOOL
201A = NON-DESIGNATED AIRMAN SCHOOL
8407 = W/C ADMIN SCHOOL

APPENDIX B

RANDOM SAMPLE of BSNs by SQUADRON

SQUADRON A

E-9/E-7	E-6	E-5	E-4	E-3(S)
16060	18060	19060	16180	16200
18050	18070	19500	18210	19100
21050	18080	22080	19080	22160
22050	18090	22090	22120	22180
23050	18200	23070	22130	23210
	18250	23080	23090	23220
E-3(O)	19050	23170	23200	24100
19520	22060	24060	25060	25070
19530	23060	25050	26070	30120
39070	27060	30080	31080	30130
39090	30050	31060	31090	31110
39110	31050		31100	31130
39130			32070	
			35100	

SQUADRON B

E-9/E-7	E-6	E-5	E-4	E-3(S)
16070	16150	16160	16180	16190
18050	18060	17050	18210	19100
22050	18080	19060	19080	19110
23050	18090	19070	23090	22160
29050	18200	19500	23190	22190
	18250	22080	24070	23210
E-3(O)	19050	22090	24080	24090
19520	23060	23070	30100	24100
19530	23160	23080	30110	30120
39070	24050	31070	31080	31110
39100	32050	32060	31100	31120
39110	35070		32070	31130
39120			35090	
			35100	

SQUADRON C

E-9/E-7	E-6	E-5	E-4	E-3(S)
16050	16150	17050	16170	19100
18050	18060	19060	18210	19110
21050	18070	19070	19080	22170
22050	18080	22080	22110	22180
29050	18100	22090	22130	23210
	18200	22100	23090	23220
E-3(O)	18250	23070	23190	24090
19520	22060	24060	24080	24100
19530	23060	25050	25060	30120
39070	24050	26060	31080	31110
39080	27060	30080	31090	31130
39110	32050		31100	32080
39120			32070	
			35090	

SQUADRON D

E-9/E-7	E-6	E-5	E-4	E-3(S)
16060	18060	17050	16180	19100
21050	18090	19060	19080	22160
23050	18100	19070	22110	22170
29050	18250	19500	22120	22180
35050	19050	22080	22130	23210
	22060	22090	22140	23220
E-3(O)	23060	23070	23090	25070
19520	23160	23170	24070	30120
19530	26050	25050	24080	30130
39070	30050	31060	26070	31110
39080	31050	35080	31090	32080
39120	32050		31100	35110
39130			32070	
			35090	

SQUADRON E

E-9/E-7	E-6	E-5	E-4	E-3(S)
18050	16150	19060	18210	19100
22050	18060	19500	19080	19110
23050	18090	22080	22120	22150
29050	18200	22090	22130	22160
37050	18250	23070	22140	22170
	22060	23120	23100	22180
E-3(O)	23060	24060	23130	23150
19530	24050	30075	23140	24090
39080	27050	30080	24070	24100
39090	27060	31070	24080	30125
39100	31050	35080	26070	35100
39120	32050		30110	35110
39150	35070		31080	

SQUADRON F

E-9/E-7	E-6	E-5	E-4	E-3(S)
16050	16150	17050	16180	22160
16060	18080	19060	18210	22170
22050	18200	19070	19080	22190
35050	18250	19500	22120	23210
37050	19050	22100	22140	23220
	22060	23170	23090	24090
E-3(O)	23060	26060	23200	24100
19520	23160	30080	24080	25070
39080	26050	31060	25060	30130
39100	31050	31070	26070	32080
39110	32050	32060	31080	35110
39120	35070		32070	35130
39130			35090	
			35100	

SQUADRON G

E-9/E-7	E-6	E-5	E-4	E-3(S)
16060	18070	16160	16170	16190
23050	18100	19060	16180	16200
29050	18200	19070	18210	19100
35050	19050	22080	22110	19110
37050	22060	22100	22140	22150
	23110	23070	23090	22160
E-3(O)	26050	24060	23100	22170
19510	27050	25050	23130	22180
19530	30050	31060	24070	24090
39080	30065	31070	24080	24100
39090	31050	32060	25060	31120
39100	35070		26070	31130
39150	39000		31100	

APPENDIX C

WORK CENTER 220 TRAINING & QUALIFICATION DATA

FIRST QUARTER 1982
(01 JAN - 31 MAR)

ONBD	NEC	1R	2U	2V	2Z	2X	2Y	LP	6515	524N	4176	8407
31050												
02	00	03	01	01	01	01	01	00	00	00	00	00
02	01	03	01	01	00	01	01	02	02	02	01	02
02	01	03	01	01	01	00	00	02	00	00	00	00
02	01	03	01	01	01	01	01	02	02	02	01	02
02	00	00	00	00	00	00	00	00	00	00	00	00
31060												
02	01	00	00	00	01	00	00	00	02	00	00	00
02	00	00	00	01	00	00	00	00	02	02	01	00
02	01	03	01	01	00	00	00	00	00	02	00	00
02	01	03	00	01	00	01	01	02	00	02	01	02
31070												
02	01	00	00	00	01	01	01	00	02	02	00	00
01	01	00	00	01	00	00	00	02	00	00	00	00
02	01	03	00	01	00	01	01	02	00	02	00	00
31080												
02	01	00	00	01	NA	00	NA	NA	02	00	00	NA
02	01	00	01	00	NA	00	NA	NA	02	02	01	NA
01	00	00	00	01	NA	00	NA	NA	00	02	00	NA
02	01	00	00	01	NA	00	NA	NA	00	02	00	NA
31090												
02	00	03	01	01	NA	01	NA	NA	00	00	00	NA

ONBD	NEC	1R	2U	2V	2Z	2X	2Y	LP	6515	524N	4176	8407
02	01	00	01	01	NA	01	NA	NA	02	02	01	NA
02	01	03	01	01	NA	01	NA	NA	00	02	01	NA
31100												
02	01	03	01	01	NA	01	NA	NA	02	00	00	NA
02	01	00	01	01	NA	00	NA	NA	02	02	01	NA
02	00	00	00	00	NA	00	NA	NA	02	00	01	NA
02	01	00	01	01	NA	01	*1	*2	00	02	01	*2
31110												
02	00	00	00	01	NA	00	NA	NA	00	00	00	NA
02	01	00	01	01	NA	00	NA	NA	02	02	00	NA
02	00	00	01	01	NA	00	NA	NA	02	02	01	NA
31120												
02	00	00	00	00	NA	00	NA	NA	00	02	00	NA
31130												
00	00	00	00	00	NA	00	NA	NA	00	00	00	NA
01	00	00	00	00	NA	00	NA	NA	00	01	00	NA
02	00	00	00	00	NA	00	NA	NA	02	00	00	NA

WORK CENTER 220 TRAINING & QUALIFICATION DATA

SECOND QUARTER 1982
(01 APR - 30 JUN)

ONBD	NEC	1R	2U	2V	2Z	2X	2Y	LP	6515	524N	4176	8407
31050												
02	00	03	01	01	01	01	01	00	00	00	00	00
02	01	03	01	01	01	01	01	02	02	02	01	02
02	01	03	01	01	01	01	01	02	02	02	01	02
02	01	03	00	01	00	01	00	02	02	02	01	00
31060												
02	01	03	01	00	01	01	01	02	02	02	01	00
02	00	00	00	01	00	00	00	00	02	02	01	00
02	01	03	01	01	00	00	00	00	00	02	00	00
02	01	03	00	01	00	01	01	02	00	02	01	02
31070												
02	01	00	00	00	00	00	01	00	02	00	01	00
01	01	03	00	01	01	01	01	02	00	02	01	00
02	01	03	01	01	00	01	01	02	00	02	00	00
31080												
02	01	03	01	01	NA	01	NA	NA	02	00	00	NA
02	01	03	00	00	NA	00	NA	NA	00	01	00	NA
02	01	00	01	01	NA	00	NA	NA	02	02	01	NA
02	01	00	00	01	NA	00	NA	NA	00	02	00	NA
31090												
02	01	00	00	00	NA	00	NA	NA	00	00	00	NA
02	01	00	01	01	NA	01	NA	NA	02	02	01	NA
02	01	03	01	01	NA	01	NA	NA	02	02	01	NA
31100												
02	01	03	01	01	NA	01	NA	NA	02	00	00	NA

ONBD	NEC	1R	2U	2V	2Z	2X	2Y	LP	6515	524N	4176	8407
01	01	00	00	00	NA	01	NA	NA	00	00	00	NA
02	01	00	01	01	NA	00	NA	NA	02	02	01	NA
02	00	03	01	01	NA	00	NA	NA	02	02	01	NA
02	01	00	01	01	NA	01	*1	*2	00	02	01	*2

31110

02	01	00	01	01	NA	00	NA	NA	00	00	00	NA
02	01	00	00	00	NA	00	NA	NA	00	00	01	NA
02	01	00	01	01	NA	00	NA	NA	02	02	00	NA
02	01	00	01	00	NA	00	NA	NA	02	02	01	NA

31120

02	01	00	00	00	NA	00	NA	NA	00	01	00	NA
02	01	00	00	00	NA	00	NA	NA	02	02	00	NA

31130

02	00	03	01	00	NA	01	NA	NA	00	00	00	NA
02	01	00	01	01	NA	00	NA	NA	02	00	01	NA
01	00	00	00	00	NA	00	NA	NA	00	01	00	NA
02	00	00	00	00	NA	00	NA	NA	02	00	00	NA

WORK CENTER 220 TRAINING & QUALIFICATION DATA

THIRD QUARTER 1982
(01 JULY - 30 SEPT)

ONBD	NEC	1R	2U	2V	2Z	2X	2Y	LP	6515	524N	4176	8407
31050												
02	00	03	01	01	01	01	01	02	00	00	01	00
02	01	03	01	01	01	01	01	02	02	02	01	02
02	01	03	00	01	01	01	01	00	02	02	00	00
02	01	03	00	01	01	01	01	00	02	02	01	00
02	00	00	01	00	00	00	00	00	00	00	00	00
31060												
02	01	03	01	00	01	01	01	02	02	02	01	00
02	00	00	00	01	00	00	00	00	02	02	01	00
02	01	03	00	01	01	01	01	02	00	00	00	00
02	01	03	00	01	00	01	01	02	00	02	01	02
31070												
02	01	00	00	00	00	00	01	02	02	02	01	00
01	01	03	00	01	01	01	01	02	02	02	01	00
01	01	03	00	01	01	01	01	02	00	02	01	00
02	01	03	01	01	00	01	01	02	00	02	00	00
31080												
02	01	03	01	01	NA	01	NA	NA	02	02	00	NA
02	00	00	00	00	NA	00	NA	NA	00	02	01	NA
02	01	00	00	00	NA	00	NA	NA	02	02	00	NA
02	00	00	00	01	NA	00	NA	NA	00	02	00	NA
02	01	03	01	01	NA	01	NA	NA	00	02	01	NA
31090												
02	01	00	00	00	NA	00	NA	NA	02	02	01	NA
02	01	00	01	01	NA	01	NA	NA	02	02	01	NA
02	01	03	01	01	NA	01	*1	*2	02	02	01	NA

ONBD	NEC	1R	2U	2V	2Z	2X	2Y	LP	6515	524N	4176	8407
31100												
02	01	03	01	01	NA	01	NA	NA	02	02	01	NA
02	01	00	01	01	NA	00	NA	NA	02	02	01	NA
02	01	00	01	01	NA	00	NA	NA	00	00	00	NA
02	00	03	01	01	NA	01	NA	NA	02	02	01	NA
02	01	00	01	01	NA	01	*1	*2	00	02	01	*2
31110												
02	01	00	01	01	NA	00	NA	NA	00	00	00	NA
01	00	00	00	00	NA	00	NA	NA	00	02	01	NA
02	01	00	01	01	NA	00	NA	NA	02	02	00	NA
02	01	00	00	01	NA	00	NA	NA	02	02	01	NA
31120												
02	01	00	00	00	NA	00	NA	NA	02	02	00	NA
02	01	00	00	00	NA	00	NA	NA	02	02	01	NA
31130												
01	00	00	00	00	NA	00	NA	NA	00	02	01	NA
02	01	00	01	01	NA	00	NA	NA	02	02	01	NA
01	00	00	01	01	NA	00	NA	NA	00	01	00	NA
02	00	00	01	01	NA	00	NA	NA	02	00	01	NA

WORK CENTER 220 TRAINING & QUALIFICATION DATA

FOURTH QUARTER 1982
(01 OCT - 31 DEC)

ONBD	NEC	1R	2U	2V	2Z	2X	2Y	LP	6515	524N	4176	8407
31050												
02	00	03	01	01	01	01	01	02	00	00	01	00
02	01	03	01	01	01	01	01	02	02	02	01	02
02	01	03	00	01	01	01	01	00	02	02	00	00
02	01	03	00	01	01	01	01	00	02	02	01	00
02	00	00	01	00	00	00	00	00	02	00	01	00
31060												
02	01	03	01	01	01	01	01	02	02	02	01	00
02	01	00	00	01	00	01	00	00	02	02	01	02
02	01	03	00	01	01	01	01	02	00	00	00	00
02	01	03	01	01	01	01	01	02	00	02	01	02
31070												
02	01	00	00	00	00	00	01	02	02	02	01	00
01	01	03	00	01	01	01	01	02	02	02	01	00
01	01	03	00	01	01	01	01	02	00	02	01	00
02	00	03	01	01	01	01	01	00	02	02	01	02
31080												
02	01	03	01	01	NA	01	NA	NA	02	02	14	NA
02	00	00	01	00	NA	00	NA	NA	00	02	01	NA
02	00	00	00	00	NA	00	NA	NA	02	00	01	NA
02	00	00	01	01	NA	00	NA	NA	00	02	00	NA
02	01	03	01	01	NA	01	NA	NA	00	02	01	NA
31090												
02	01	00	01	01	NA	01	NA	NA	02	02	01	NA
02	00	00	00	00	NA	00	NA	NA	00	00	01	NA
02	01	03	01	01	*1	01	*1	*2	02	02	01	NA

ONBD	NEC	1R	2U	2V	2Z	2X	2Y	LP	6515	524N	4176	8407
31100												
02	01	03	01	01	NA	01	NA	NA	02	02	01	NA
02	01	00	01	01	NA	00	NA	NA	02	02	01	NA
02	01	00	01	01	NA	00	NA	NA	00	02	00	NA
02	01	03	01	01	NA	01	NA	NA	02	02	01	NA
02	00	00	01	01	NA	00	NA	NA	02	00	01	NA
31110												
02	01	00	01	01	NA	00	NA	NA	00	00	00	NA
02	01	00	01	01	NA	00	NA	NA	00	02	01	NA
02	01	00	01	01	NA	00	NA	NA	00	01	01	NA
02	01	00	01	01	NA	00	NA	NA	02	02	01	NA
31120												
02	01	00	01	01	NA	00	NA	NA	02	02	01	NA
01	00	00	01	00	NA	00	NA	NA	00	00	00	NA
31130												
01	00	00	01	01	NA	00	NA	NA	00	02	01	NA
00	00	00	00	00	NA	00	NA	NA	00	00	00	NA
01	00	00	00	00	NA	00	NA	NA	00	01	00	NA
02	00	00	00	01	NA	00	NA	NA	02	00	00	NA

APPENDIX D

DEVIATION SUMMARY REPORT

Work Center CPO

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
21050								
	9	5	0.56	0.56	35	0.02	1.00	0.44
	9	5	0.56	0.56	1	0.02	0.58	0.02
	9	5	0.56	0.89	4	0.02	0.65	-0.24
	9	5	0.56	0.89	7	0.02	0.73	-0.16
	9	5	0.56	0.67	7	0.02	0.73	0.06
	9	5	0.56	0.89	10	0.02	0.80	-0.09
	9	5	0.56	1.00	10	0.02	0.80	-0.20
	9	5	0.56	1.00	13	0.02	0.88	-0.12
	9	5	0.56	0.89	6	0.02	0.70	-0.19
	9	5	0.56	0.89	3	0.02	0.63	-0.26
	9	5	0.56	0.89	9	0.02	0.78	-0.11
	9	5	0.56	0.89	12	0.02	0.85	-0.04
29050								
	9	5	0.56	1.22	4	0.02	0.65	-0.57
	9	5	0.56	1.00	5	0.02	0.68	-0.32
	9	5	0.56	1.11	8	0.02	0.75	-0.36
	9	5	0.56	1.11	25	0.02	1.00	-0.11
	9	5	0.56	1.11	27	0.02	1.00	-0.11
	9	5	0.56	0.44	19	0.02	1.00	0.56
	9	5	0.56	1.11	30	0.02	1.00	-0.11
	9	5	0.56	1.00	18	0.02	1.00	0
	9	5	0.56	1.00	12	0.02	0.85	-0.15
	9	5	0.56	1.00	15	0.02	0.93	-0.07
	9	5	0.56	1.00	21	0.02	1.00	0
	9	5	0.56	0.11	4	0.02	0.65	0.54
	9	5	0.56	0.11	7	0.02	0.73	0.62
	9	5	0.56	0.78	18	0.02	1.00	0.22
	9	5	0.56	1.00	16	0.02	0.95	-0.05
	9	5	0.56	1.00	19	0.02	1.00	0
	9	5	0.56	1.22	31	0.02	1.00	-0.22
	9	5	0.56	0.89	13	0.02	0.88	-0.01

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
37050								
	9	5	0.56	0.89	6	0.02	0.70	-0.19
	9	5	0.56	0.89	5	0.02	0.68	-0.21
	9	5	0.56	0.89	8	0.02	0.75	-0.14
	9	5	0.56	0.78	3	0.02	0.63	-0.15
	9	5	0.56	0.78	6	0.02	0.70	-0.08
	9	5	0.56	0.78	9	0.02	0.78	-0.00
	9	5	0.56	0.56	26	0.02	1.00	0.44
	9	5	0.56	0.56	29	0.02	1.00	0.44
	9	5	0.56	0.89	32	0.02	1.00	0.11

Work Center 020

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
16050								
	12	7	0.58	0.92	9	0.02	0.79	-0.13
	12	7	0.58	0.92	12	0.02	0.86	-0.06
	12	7	0.58	0.92	15	0.02	0.93	0.01
	12	7	0.58	0.92	18	0.02	1.00	0.08
	12	7	0.58	0.92	6	0.02	0.72	-0.20
	12	7	0.58	1.08	0	0.02	0.58	-0.50
	12	7	0.58	1.08	3	0.02	0.65	-0.43
	12	7	0.58	1.08	6	0.02	0.72	-0.36
16060								
	12	7	0.58	0.67	4	0.02	0.68	0.01
	12	7	0.58	1.00	7	0.02	0.75	-0.25
	12	7	0.58	0.67	1	0.02	0.61	-0.06
	12	7	0.58	0.58	17	0.02	0.98	0.40
	12	7	0.58	1.17	6	0.02	0.72	-0.45
	12	7	0.58	0.67	5	0.02	0.70	0.03
	12	7	0.58	0.67	3	0.02	0.65	-0.02
	12	7	0.58	0.67	8	0.02	0.77	0.10
	12	7	0.58	0.25	7	0.02	0.75	0.50
	12	7	0.58	0.25	10	0.02	0.81	0.56
	12	7	0.58	0.50	28	0.02	1.00	0.50
	12	7	0.58	0.50	31	0.02	1.00	0.50
	12	7	0.58	0.42	20	0.02	1.00	0.58
	12	7	0.58	0.42	23	0.02	1.00	0.58
16070								
	12	7	0.58	0.92	10	0.02	0.81	-0.11
	12	7	0.58	0.92	13	0.02	0.88	-0.04
	12	7	0.58	0.92	16	0.02	0.95	0.03

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
16150								
	19	11	0.58	0.53	26	0.02	1.00	0.47
	19	11	0.58	0.05	0	0.02	0.58	0.53
	19	11	0.58	0.11	3	0.02	0.65	0.54
	19	11	0.58	0.79	12	0.02	0.86	0.07
	19	11	0.58	0.79	6	0.02	0.72	-0.07
	19	11	0.58	0.79	15	0.02	0.93	0.14
	19	11	0.58	0.21	13	0.02	0.88	0.67
	19	11	0.58	0.05	7	0.02	0.74	0.69
	19	11	0.58	0.21	10	0.02	0.81	0.60
	19	11	0.58	0.37	31	0.02	1.00	0.63
16160								
	10	4	0.40	0.70	14	0.03	0.87	0.17
	10	4	0.40	0.40	26	0.03	1.00	0.60
	10	4	0.40	0.40	29	0.03	1.00	0.60
	10	4	0.40	0.30	28	0.03	1.00	0.70
	10	4	0.40	0.30	14	0.03	0.87	0.57
	10	4	0.40	0.60	19	0.03	1.00	0.40
	10	4	0.40	0.60	22	0.03	1.00	0.40
16170								
	10	4	0.40	1.00	19	0.03	1.00	0
	10	4	0.40	1.00	13	0.03	0.83	-0.17
	10	4	0.40	1.00	22	0.03	1.00	0
	10	4	0.40	1.00	16	0.03	0.93	-0.07
	10	4	0.40	0.40	31	0.03	1.00	0.60
	10	4	0.40	0.30	25	0.03	1.00	0.70
	10	4	0.40	0.40	34	0.03	1.00	0.60
16180								
	10	4	0.40	0.60	26	0.03	1.00	0.40
	10	4	0.40	0.40	19	0.03	1.00	0.60
	10	4	0.40	0.40	22	0.03	1.00	0.60
	10	4	0.40	0.10	4	0.03	0.53	0.43
	10	4	0.40	0.80	20	0.03	1.00	0.20
	10	4	0.40	0.40	17	0.03	0.97	0.57
	10	4	0.40	0.80	23	0.03	1.00	0.20
	10	4	0.40	0.10	3	0.03	0.50	0.40
	10	4	0.40	0.40	12	0.03	0.80	0.40
	10	4	0.40	0.30	6	0.03	0.60	0.30
	10	4	0.40	0.30	9	0.03	0.70	0.40
	10	4	0.40	0.10	38	0.03	1.00	0.90
	10	4	0.40	0.10	25	0.03	1.00	0.90

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
16190								
	6	2	0.33	0.67	5	0.04	0.52	-0.15
	6	2	0.33	0.67	2	0.04	0.41	-0.26
	6	2	0.33	0.17	21	0.04	1.00	0.83
	6	2	0.33	0.17	24	0.04	1.00	0.83
16200								
	6	2	0.33	0.67	6	0.04	0.56	-0.11
	6	2	0.33	0.67	3	0.04	0.44	-0.23
	6	2	0.33	1.00	20	0.04	1.00	0
17050								
	10	4	0.40	0.60	32	0.03	1.00	0.40
	10	4	0.40	0.30	29	0.03	1.00	0.70
	10	4	0.40	0.80	26	0.03	1.00	0.20
	10	4	0.40	0.80	29	0.03	1.00	0.20
	10	4	0.40	0.80	32	0.03	1.00	0.20
	10	4	0.40	0.80	23	0.03	1.00	0.20
	10	4	0.40	0.80	32	0.03	1.00	0.20
	10	4	0.40	1.00	35	0.03	1.00	0
	10	4	0.40	1.00	32	0.03	1.00	0
	10	4	0.40	0.50	3	0.03	0.50	-0.00

Work Center 040

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
18050								
	16	4	0.25	0.75	2	0.04	0.33	-0.42
	16	4	0.25	1.13	5	0.04	0.46	-0.67
	16	4	0.25	1.13	8	0.04	0.58	-0.55
	16	4	0.25	1.13	11	0.04	0.71	-0.42
	16	4	0.25	0.88	20	0.04	1.00	0.12
	16	4	0.25	0.69	25	0.04	1.00	0.31
	16	4	0.25	0.69	28	0.04	1.00	0.31
	16	4	0.25	0.38	4	0.04	0.42	0.04
	16	4	0.25	0.38	7	0.04	0.54	0.16
	16	4	0.25	0.94	10	0.04	0.67	-0.27
	16	4	0.25	0.94	13	0.04	0.79	-0.15
	16	4	0.25	0.25	20	0.04	1.00	0.75
	16	4	0.25	0.88	12	0.04	0.75	-0.13
	16	4	0.25	0.88	15	0.04	0.88	-0.01
18060								
	23	4	0.17	0.43	10	0.05	0.63	0.20
	23	4	0.17	0.52	13	0.05	0.77	0.25
	23	4	0.17	0.74	16	0.05	0.91	0.17
	23	4	0.17	0.91	19	0.05	1.00	0.09
	23	4	0.17	0.70	21	0.05	1.00	0.30
	23	4	0.17	0.39	7	0.05	0.50	0.11
	23	4	0.17	0.65	10	0.05	0.63	-0.02
	23	4	0.17	0.35	29	0.05	1.00	0.65
	23	4	0.17	0.35	26	0.05	1.00	0.65
	23	4	0.17	0.35	32	0.05	1.00	0.65
	23	4	0.17	0.57	30	0.05	1.00	0.43
	23	4	0.17	1.09	40	0.05	1.00	-0.09
	23	4	0.17	0.39	10	0.05	0.63	0.24
	23	4	0.17	0.83	37	0.05	1.00	0.17
	23	4	0.17	0.39	13	0.05	0.77	0.38
	23	4	0.17	0.74	4	0.05	0.36	-0.38
	23	4	0.17	1.00	10	0.05	0.63	-0.37
	23	4	0.17	0.65	15	0.05	0.86	0.21

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
18070								
	19	4	0.21	0.26	25	0.04	1.00	0.74
	19	4	0.21	0.53	28	0.04	1.00	0.47
	19	4	0.21	0.74	31	0.04	1.00	0.26
	19	4	0.21	0.37	20	0.04	1.00	0.63
	19	4	0.21	0.58	23	0.04	1.00	0.42
	19	4	0.21	0.74	22	0.04	1.00	0.26
	19	4	0.21	0.58	26	0.04	1.00	0.42
	19	4	0.21	0.74	38	0.04	1.00	0.26
	19	4	0.21	0.58	35	0.04	1.00	0.42
	19	4	0.21	0.74	41	0.04	1.00	0.26
	19	4	0.21	0.79	31	0.04	1.00	0.21
18080								
	23	4	0.17	0.43	22	0.05	1.00	0.57
	23	4	0.17	0.22	21	0.05	1.00	0.78
	23	4	0.17	0.57	32	0.05	1.00	0.43
	23	4	0.17	0.57	29	0.05	1.00	0.43
	23	4	0.17	0.57	26	0.05	1.00	0.43
18090								
	23	4	0.17	0.39	24	0.05	1.00	0.61
	23	4	0.17	0.39	27	0.05	1.00	0.61
	23	4	0.17	0.43	22	0.05	1.00	0.57
	23	4	0.17	0.61	25	0.05	1.00	0.39
	23	4	0.17	0.52	16	0.05	0.91	0.39
	23	4	0.17	0.87	19	0.05	1.00	0.13
	23	4	0.17	0.52	13	0.05	0.77	0.25
	23	4	0.17	0.87	10	0.05	0.63	-0.24
	23	4	0.17	0.87	16	0.05	0.91	0.04
	23	4	0.17	0.87	13	0.05	0.77	-0.10
	23	4	0.17	0.87	19	0.05	1.00	0.13
	23	4	0.17	0.74	24	0.05	1.00	0.26
	23	4	0.17	1.00	32	0.05	1.00	0
	23	4	0.17	0.61	27	0.05	1.00	0.39

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
18100								
	19	4	0.21	0.53	23	0.04	1.00	0.47
	19	4	0.21	0.53	20	0.04	1.00	0.47
	19	4	0.21	0.53	17	0.04	0.96	0.43
	19	4	0.21	0.53	26	0.04	1.00	0.47
	19	4	0.21	0.68	30	0.04	1.00	0.32
	19	4	0.21	0.37	27	0.04	1.00	0.63
	19	4	0.21	0.32	24	0.04	1.00	0.68
	19	4	0.21	0.68	33	0.04	1.00	0.32
	19	4	0.21	0.79	47	0.04	1.00	0.21
	19	4	0.21	0.89	50	0.04	1.00	0.11
	19	4	0.21	0.79	44	0.04	1.00	0.21
	19	4	0.21	0.16	41	0.04	1.00	0.84
18200								
	19	4	0.21	0.58	27	0.04	1.39	0.81
	19	4	0.21	0.74	18	0.04	1.00	0.26
	19	4	0.21	0.63	30	0.04	1.53	0.90
	19	4	0.21	0.26	24	0.04	1.26	1.00
	19	4	0.21	0.89	28	0.04	1.44	0.55
	19	4	0.21	0.89	31	0.04	1.57	0.68
	19	4	0.21	1.11	34	0.04	1.00	-0.11
	19	4	0.21	0.95	41	0.04	1.00	0.05
	19	4	0.21	0.84	32	0.04	1.00	0.16
	19	4	0.21	0.95	38	0.04	1.00	0.05
	19	4	0.21	0.84	35	0.04	1.00	0.16
	19	4	0.21	0.84	26	0.04	1.00	0.16
	19	4	0.21	0.84	21	0.04	1.00	0.16
	19	4	0.21	0.95	29	0.04	1.00	0.05
	19	4	0.21	0.84	23	0.04	1.00	0.16
	19	4	0.21	0.89	30	0.04	1.00	0.11
	19	4	0.21	0.26	24	0.04	1.00	0.74
	19	4	0.21	0.89	27	0.04	1.00	0.11
	19	4	0.21	0.26	11	0.04	0.69	0.43

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
18210								
	9	4	0.44	0.56	22	0.03	1.00	0.44
	9	4	0.44	0.22	9	0.03	0.72	0.50
	9	4	0.44	0.56	25	0.03	1.00	0.44
	9	4	0.44	0.67	28	0.03	1.00	0.33
	9	4	0.44	0.56	17	0.03	0.97	0.41
	9	4	0.44	0.89	20	0.03	1.00	0.11
	9	4	0.44	0.44	18	0.03	1.00	0.56
	9	4	0.44	0.44	21	0.03	1.00	0.56
	9	4	0.44	0.44	12	0.03	0.81	0.37
	9	4	0.44	0.44	15	0.03	0.91	0.47
	9	4	0.44	0.78	31	0.03	1.00	0.22
	9	4	0.44	0.44	8	0.03	0.69	0.25
	9	4	0.44	0.44	23	0.03	1.00	0.56
	9	-4	0.44	0.44	17	0.03	0.97	0.53
	9	4	0.44	0.44	14	0.03	0.88	0.44
	9	4	0.44	0.78	12	0.03	0.81	0.03
	9	4	0.44	0.78	9	0.03	0.72	-0.06
	9	4	0.44	0.56	23	0.03	1.00	0.44
	9	4	0.44	0.11	24	0.03	1.00	0.89
	9	4	0.44	0.56	20	0.03	1.00	0.44
	9	4	0.44	0.56	17	0.03	0.97	0.41
18250								
	14	6	0.43	0.64	8	0.03	0.68	0.04
	14	6	0.43	0.64	6	0.03	0.62	-0.02
	14	6	0.43	0.64	3	0.03	0.52	-0.12
	14	6	0.43	0.64	32	0.03	1.00	0.36
	14	6	0.43	1.00	12	0.03	0.81	-0.19
	14	6	0.43	0.79	6	0.03	0.62	-0.17
	14	6	0.43	1.00	15	0.03	0.90	-0.10
	14	6	0.43	0.93	9	0.03	0.71	-0.22
	14	6	0.43	0.93	35	0.03	1.00	0.07
	14	6	0.43	0.93	38	0.03	1.00	0.07
	14	6	0.43	0.93	41	0.03	1.00	0.07
	14	6	0.43	0.79	35	0.03	1.00	0.21
	14	6	0.43	0.79	1	0.03	0.46	-0.33
	14	6	0.43	0.79	29	0.03	1.00	0.21
	14	6	0.43	0.71	22	0.03	1.00	0.29
	14	6	0.43	0.29	13	0.03	0.84	0.55
	14	6	0.43	0.71	25	0.03	1.00	0.29
	14	6	0.43	0.50	16	0.03	0.94	0.44

Work Center 050

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
19050								
	12	8	0.67	0.50	25	0.02	1.00	0.50
	12	8	0.67	0.67	28	0.02	1.00	0.33
	12	8	0.67	0.67	31	0.02	1.00	0.33
	12	8	0.67	0.67	34	0.02	1.00	0.33
	12	8	0.67	0.42	34	0.02	1.00	0.58
	12	8	0.67	0.83	24	0.02	1.00	0.17
	12	8	0.67	0.83	27	0.02	1.00	0.17
	12	8	0.67	0.33	5	0.02	0.76	0.43
	12	8	0.67	0.50	16	0.02	0.96	0.46
	12	8	0.67	0.50	19	0.02	1.00	0.50
	12	8	0.67	0.42	34	0.02	1.00	0.58
	12	8	0.67	0.42	37	0.02	1.00	0.58
	12	8	0.67	0.33	1	0.02	0.69	0.36
	12	8	0.67	0.33	4	0.02	0.74	0.41
	12	8	0.67	0.17	26	0.02	1.00	0.83
	12	8	0.67	0.17	29	0.02	1.00	0.83
	12	8	0.67	0.17	32	0.02	1.00	0.83
19060								
	12	8	0.67	0.75	23	0.02	1.00	0.25
	12	8	0.67	0.75	26	0.02	1.00	0.25
	12	8	0.67	0.75	29	0.02	1.00	0.25
	12	8	0.67	0.25	23	0.02	1.00	0.75
	12	8	0.67	0.17	5	0.02	0.76	0.59
	12	8	0.67	0.17	2	0.02	0.70	0.53
	12	8	0.67	0.33	11	0.02	0.87	0.54
	12	8	0.67	0.75	23	0.02	1.00	0.25
	12	8	0.67	0.75	26	0.02	1.00	0.25
	12	8	0.67	0.75	29	0.02	1.00	0.25
	12	8	0.67	0.75	20	0.02	1.00	0.25
	12	8	0.67	0.17	12	0.02	0.89	0.72
	12	8	0.67	0.25	18	0.02	1.00	0.75
	12	8	0.67	0.25	21	0.02	1.00	0.75
	12	8	0.67	0.42	17	0.02	0.98	0.56
	12	8	0.67	0.42	20	0.02	1.00	0.58
	12	8	0.67	0.33	14	0.02	0.93	0.60
	12	8	0.67	0.42	23	0.02	1.00	0.58
	12	8	0.67	0.33	4	0.02	0.74	0.41
	12	8	0.67	0.17	1	0.02	0.69	0.52
	12	8	0.67	0.33	7	0.02	0.80	0.47
	12	8	0.67	0.50	20	0.02	1.00	0.50

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
19070								
	12	8	0.67	0.67	21	0.02	1.00	0.33
	12	8	0.67	0.50	35	0.02	1.00	0.50
	12	8	0.67	0.42	32	0.02	1.00	0.58
	12	8	0.67	0.42	1	0.02	0.69	0.27
	12	8	0.67	0.58	4	0.02	0.74	0.16
	12	8	0.67	0.50	31	0.02	1.00	0.50
	12	8	0.67	0.50	28	0.02	1.00	0.50
	12	8	0.67	0.50	34	0.02	1.00	0.50
	12	8	0.67	0.50	25	0.02	1.00	0.50
	12	8	0.67	0.33	12	0.02	0.89	0.56
	12	8	0.67	0.08	9	0.02	0.83	0.75
	12	8	0.67	0.33	15	0.02	0.94	0.61
	12	8	0.67	0.42	18	0.02	1.00	0.58
19080								
	9	6	0.67	0.22	20	0.02	1.00	0.78
	9	6	0.67	0.44	26	0.02	1.00	0.56
	9	6	0.67	0.44	23	0.02	1.00	0.56
	9	6	0.67	0.44	29	0.02	1.00	0.56
	9	6	0.67	0.44	24	0.02	1.00	0.56
	9	6	0.67	0.44	27	0.02	1.00	0.56
	9	6	0.67	0.33	35	0.02	1.00	0.67
	9	6	0.67	0.56	29	0.02	1.00	0.44
	9	6	0.67	0.33	32	0.02	1.00	0.67
	9	6	0.67	0.33	41	0.02	1.00	0.67
	9	6	0.67	0.22	21	0.02	1.00	0.78
	9	6	0.67	0.11	15	0.02	0.94	0.83
	9	6	0.67	0.11	18	0.02	1.00	0.89
	9	6	0.67	0.11	15	0.02	0.94	0.83
	9	6	0.67	0.11	4	0.02	0.74	0.63
	9	6	0.67	0.33	11	0.02	0.87	0.54
	9	6	0.67	0.33	14	0.02	0.93	0.60
	9	6	0.67	0.33	17	0.02	0.98	0.65
	9	6	0.67	0.33	20	0.02	1.00	0.67
	9	6	0.67	0.22	11	0.02	0.87	0.65

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
19100								
	8	5	0.63	0.63	11	0.02	0.85	0.22
	8	5	0.63	0.63	14	0.02	0.92	0.29
	8	5	0.63	0.25	5	0.02	0.73	0.48
	8	5	0.63	0.63	17	0.02	0.98	0.35
	8	5	0.63	0.50	4	0.02	0.71	0.21
	8	5	0.63	0.25	21	0.02	1.00	0.75
	8	5	0.63	0.50	7	0.02	0.77	0.27
	8	5	0.63	0.63	8	0.02	0.79	0.16
	8	5	0.63	0.63	23	0.02	1.00	0.37
	8	5	0.63	0.63	11	0.02	0.85	0.22
	8	5	0.63	0.63	26	0.02	1.00	0.37
	8	5	0.63	0.50	11	0.02	0.85	0.35
	8	5	0.63	0.50	17	0.02	0.98	0.48
	8	5	0.63	0.50	14	0.02	0.92	0.42
	8	5	0.63	0.50	20	0.02	1.00	0.50
	8	5	0.63	0.50	5	0.02	0.73	0.23
	8	5	0.63	0.13	6	0.02	0.75	0.62
	8	5	0.63	0.13	3	0.02	0.69	0.56
	8	5	0.63	0.25	22	0.02	1.00	0.75
	8	5	0.63	0.13	9	0.02	0.81	0.68
19110								
	8	5	0.63	0.50	16	0.02	0.96	0.46
	8	5	0.63	0.13	7	0.02	0.77	0.64
	8	5	0.63	0.25	13	0.02	0.90	0.65
	8	5	0.63	0.50	27	0.02	1.00	0.50
	8	5	0.63	0.50	24	0.02	1.00	0.50
	8	5	0.63	0.38	21	0.02	1.00	0.62
	8	5	0.63	0.25	9	0.02	0.81	0.56
	8	5	0.63	0.25	7	0.02	0.77	0.52
	8	5	0.63	0.50	10	0.02	0.83	0.33
	8	5	0.63	0.50	16	0.02	0.96	0.46
	8	5	0.63	0.50	13	0.02	0.90	0.40
	8	5	0.63	0.25	10	0.02	0.83	0.58
	8	5	0.63	0.50	5	0.02	0.73	0.23

Work Center 050

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
19500								
	12	8	0.67	0.17	17	0.02	0.98	0.81
	12	8	0.67	0.17	11	0.02	0.87	0.70
	12	8	0.67	0.17	14	0.02	0.93	0.76
	12	8	0.67	0.08	26	0.02	1.00	0.92
	12	8	0.67	0.25	21	0.02	1.00	0.75
	12	8	0.67	0.25	18	0.02	1.00	0.75
	12	8	0.67	0.33	37	0.02	1.00	0.67
	12	8	0.67	0.33	34	0.02	1.00	0.67
	12	8	0.67	0.33	28	0.02	1.00	0.67
	12	8	0.67	0.08	3	0.02	0.72	0.64
	12	8	0.67	0.08	6	0.02	0.78	0.70
	12	8	0.67	0.08	0	0.02	0.67	0.59
	12	8	0.67	0.08	27	0.02	1.00	0.92
19510								
	5	3	0.60	0.60	26	0.02	1.00	0.40
	5	3	0.60	0.60	23	0.02	1.00	0.40
	5	3	0.60	0.60	20	0.02	1.00	0.40
	5	3	0.60	0.40	17	0.02	0.98	0.58
19520								
	5	3	0.60	0.60	7	0.02	0.76	0.16
	5	3	0.60	0.40	3	0.02	0.67	0.27
	5	3	0.60	0.60	10	0.02	0.82	0.22
	5	3	0.60	0.40	4	0.02	0.69	0.29
	5	3	0.60	0.40	13	0.02	0.89	0.49
	5	3	0.60	0.40	4	0.02	0.69	0.29
	5	3	0.60	0.60	12	0.02	0.87	0.27
	5	3	0.60	1.00	18	0.02	1.00	0
	5	3	0.60	0.80	15	0.02	0.93	0.13
	5	3	0.60	0.60	9	0.02	0.80	0.20
	5	3	0.60	0.40	4	0.02	0.69	0.29
	5	3	0.60	0.40	7	0.02	0.76	0.36
	5	3	0.60	0.40	7	0.02	0.76	0.36
	5	3	0.60	0.60	13	0.02	0.89	0.29
	5	3	0.60	0.60	16	0.02	0.96	0.36
	5	3	0.60	0.60	19	0.02	1.00	0.40
	5	3	0.60	0.60	10	0.02	0.82	0.22

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
19530								
	5	3	0.60	0.60	16	0.02	0.96	0.36
	5	3	0.60	0.60	13	0.02	0.89	0.29
	5	3	0.60	0.40	13	0.02	0.89	0.49
	5	3	0.60	0.60	19	0.02	1.00	0.40
	5	3	0.60	0.40	9	0.02	0.80	0.40
	5	3	0.60	0.40	10	0.02	0.82	0.42
	5	3	0.60	0.40	7	0.02	0.76	0.36
	5	3	0.60	0.40	3	0.02	0.67	0.27
	5	3	0.60	0.40	4	0.02	0.69	0.29
	5	3	0.60	0.40	13	0.02	0.89	0.49
	5	3	0.60	0.40	7	0.02	0.76	0.36
	5	3	0.60	0.60	17	0.02	0.98	0.38
	5	3	0.60	0.40	7	0.02	0.76	0.36
	5	3	0.60	0.60	6	0.02	0.73	0.13
	5	3	0.60	0.40	4	0.02	0.69	0.29
	5	3	0.60	0.60	7	0.02	0.76	0.16
	5	3	0.60	0.40	4	0.02	0.69	0.29
	5	3	0.60	0.40	15	0.02	0.93	0.53
	5	3	0.60	0.40	5	0.02	0.71	0.31
	5	3	0.60	0.40	3	0.02	0.67	0.27
	5	3	0.60	0.40	5	0.02	0.71	0.31

WORK CENTER 110

BSN	Ideal Pts	Sect (2)	Ck-In %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
22050								
	19	5	0.26	1.11	15	0.04	0.88	-0.23
	19	5	0.26	0.95	4	0.04	0.43	-0.52
	19	5	0.26	0.84	5	0.04	0.47	-0.37
	19	5	0.26	0.95	14	0.04	0.84	-0.11
	19	5	0.26	1.11	18	0.04	1.00	-0.11
	19	5	0.26	0.84	1	0.04	0.30	-0.54
	19	5	0.26	0.95	7	0.04	0.55	-0.40
	19	5	0.26	1.00	17	0.04	0.96	-0.04
	19	5	0.26	1.11	6	0.04	0.51	-0.60
	19	5	0.26	0.84	4	0.04	0.43	-0.41
	19	5	0.26	0.68	2	0.04	0.35	-0.33
	19	5	0.26	0.84	11	0.04	0.71	-0.13
	19	5	0.26	0.95	37	0.04	1.00	0.05
	19	5	0.26	1.11	9	0.04	0.63	-0.48
	19	5	0.26	0.89	19	0.04	1.00	0.11
	19	5	0.26	0.68	5	0.04	0.47	-0.21
	19	5	0.26	0.79	5	0.04	0.47	-0.32
	19	5	0.26	0.95	40	0.04	1.00	0.05
22060								
	19	5	0.26	0.89	2	0.04	0.35	-0.54
	19	5	0.26	0.53	9	0.04	0.63	0.10
	19	5	0.26	1.11	6	0.04	0.51	-0.60
	19	5	0.26	1.00	0	0.04	0.26	-0.74
	19	5	0.26	0.58	14	0.04	0.84	0.26
	19	5	0.26	0.89	5	0.04	0.47	-0.42
	19	5	0.26	0.11	2	0.04	0.35	0.24
	19	5	0.26	0.95	31	0.04	1.00	0.05
	19	5	0.26	1.11	3	0.04	0.39	-0.72
	19	5	0.26	0.79	17	0.04	0.96	0.17
	19	5	0.26	0.89	8	0.04	0.59	-0.30
	19	5	0.26	0.26	5	0.04	0.47	0.21
	19	5	0.26	0.95	34	0.04	1.00	0.05
	19	5	0.26	1.11	12	0.04	0.75	-0.36
	19	5	0.26	1.11	6	0.04	0.51	-0.60
	19	5	0.26	0.79	20	0.04	1.00	0.21
	19	5	0.26	0.89	11	0.04	0.71	-0.18
	19	5	0.26	0.63	8	0.04	0.59	-0.04
	19	5	0.26	0.95	37	0.04	1.00	0.05
	19	5	0.26	0.68	13	0.04	0.79	0.11
	19	5	0.26	1.11	9	0.04	0.63	-0.48
	19	5	0.26	0.79	23	0.04	1.00	0.21

BSN	Ideal Pts	Sect (2)	Ch-In %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
22080								
	19	5	0.26	0.44	15	0.04	0.88	0.44
	19	5	0.26	0.42	18	0.04	1.00	0.58
	19	5	0.26	0.69	15	0.04	0.88	0.19
	19	5	0.26	0.53	21	0.04	1.00	0.47
	19	5	0.26	0.56	19	0.04	1.00	0.44
	19	5	0.26	0.79	22	0.04	1.00	0.21
	19	5	0.26	0.79	25	0.04	1.00	0.21
	19	5	0.26	0.88	24	0.04	1.00	0.12
	19	5	0.26	0.89	50	0.04	1.00	0.11
	19	5	0.26	0.75	21	0.04	1.00	0.25
	19	5	0.26	0.89	53	0.04	1.00	0.11
	19	5	0.26	0.94	34	0.04	1.00	0.06
	19	5	0.26	0.79	26	0.04	1.00	0.21
	19	5	0.26	0.26	23	0.04	1.00	0.74
	19	5	0.26	0.84	9	0.04	0.63	-0.21
	19	5	0.26	0.94	3	0.04	0.39	-0.55
	19	5	0.26	0.84	12	0.04	0.75	-0.09
	19	5	0.26	0.19	4	0.04	0.43	0.24
	19	5	0.26	0.38	7	0.04	0.55	0.17
	19	5	0.26	0.42	10	0.04	0.67	0.25
	19	5	0.26	0.63	13	0.04	0.80	0.17
22090								
	19	5	0.26	0.68	41	0.04	1.00	0.32
	19	5	0.26	1.00	21	0.04	1.00	0
	19	5	0.26	1.00	18	0.04	1.00	0
	19	5	0.26	1.00	16	0.04	0.92	-0.08
	19	5	0.26	1.06	11	0.04	0.71	-0.35
	19	5	0.26	1.11	14	0.04	0.84	-0.27
	19	5	0.26	1.11	17	0.04	0.96	-0.15
	19	5	0.26	0.53	10	0.04	0.67	0.14
	19	5	0.26	0.88	31	0.04	1.00	0.12
	19	5	0.26	0.58	13	0.04	0.80	0.22
	19	5	0.26	1.00	34	0.04	1.00	0
	19	5	0.26	0.94	14	0.04	0.84	-0.10
	19	5	0.26	0.84	17	0.04	0.96	0.12
	19	5	0.26	0.95	20	0.04	1.00	0.05
	19	5	0.26	0.11	7	0.04	0.55	0.44
	19	5	0.26	0.13	1	0.04	0.30	0.17
	19	5	0.26	0.32	11	0.04	0.71	0.39

BSN	Ideal Pts	Sect (2)	Ch-In %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
22100								
	19	5	0.26	0.69	52	0.04	1.00	0.31
	19	5	0.26	0.68	16	0.04	0.92	0.24
	19	5	0.26	0.69	49	0.04	1.00	0.31
	19	5	0.26	0.68	19	0.04	1.00	0.32
	19	5	0.26	0.44	8	0.04	0.59	0.15
	19	5	0.26	0.37	14	0.04	0.84	0.47
	19	5	0.26	0.44	11	0.04	0.71	0.27
	19	5	0.26	0.37	17	0.04	0.96	0.59
	19	5	0.26	0.75	24	0.04	1.00	0.25
	19	5	0.26	0.75	21	0.04	1.00	0.25
	19	5	0.26	0.74	22	0.04	1.00	0.26
	19	5	0.26	0.74	25	0.04	1.00	0.26
22110								
	12	3	0.25	0.58	35	0.04	1.00	0.42
	12	3	0.25	0.58	38	0.04	1.00	0.42
	12	3	0.25	0.54	32	0.04	1.00	0.46
	12	3	0.25	0.92	41	0.04	1.00	0.08
	12	3	0.25	0.33	17	0.04	0.96	0.63
	12	3	0.25	0.33	14	0.04	0.83	0.50
	12	3	0.25	0.58	20	0.04	1.00	0.42
	12	3	0.25	0.67	8	0.04	0.58	-0.09
	12	3	0.25	0.17	2	0.04	0.33	0.16
	12	3	0.25	0.77	29	0.04	1.00	0.23
	12	3	0.25	0.92	11	0.04	0.71	-0.21
22120								
	12	3	0.25	0.31	3	0.04	0.38	0.06
	12	3	0.25	0.67	19	0.04	1.00	0.33
	12	3	0.25	0.33	6	0.04	0.50	0.17
	12	3	0.25	0.17	9	0.04	0.63	0.45
	12	3	0.25	0.50	8	0.04	0.58	0.08
	12	3	0.25	0.58	11	0.04	0.71	0.13
	12	3	0.25	0.50	5	0.04	0.46	-0.04
	12	3	0.25	0.31	6	0.04	0.50	0.19
	12	3	0.25	0.50	8	0.04	0.58	0.08
	12	3	0.25	0.58	21	0.04	1.00	0.42
	12	3	0.25	1.33	33	0.04	1.00	-0.33
	12	3	0.25	1.33	36	0.04	1.00	-0.33
	12	3	0.25	1.08	27	0.04	1.00	-0.08
	12	3	0.25	1.25	30	0.04	1.00	-0.25

BSN	Ideal Pts	Sect (2)	Ch-In %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
22130								
	12	3	0.25	0.58	26	0.04	1.00	0.42
	12	3	0.25	0.15	31	0.04	1.00	0.85
	12	3	0.25	0.58	29	0.04	1.00	0.42
	12	3	0.25	0.17	34	0.04	1.00	0.83
	12	3	0.25	0.83	31	0.04	1.00	0.17
	12	3	0.25	0.92	37	0.04	1.00	0.08
	12	3	0.25	0.83	34	0.04	1.00	0.17
	12	3	0.25	0.54	28	0.04	1.00	0.46
	12	3	0.25	0.33	10	0.04	0.67	0.34
	12	3	0.25	0.50	13	0.04	0.79	0.29
	12	3	0.25	0.33	7	0.04	0.54	0.21
	12	3	0.25	0.58	10	0.04	0.67	0.09
	12	3	0.25	0.38	16	0.04	0.92	0.54
	12	3	0.25	0.58	13	0.04	0.79	0.21
22140								
	12	3	0.25	0.58	23	0.04	1.00	0.42
	12	3	0.25	0.58	20	0.04	1.00	0.42
	12	3	0.25	0.83	26	0.04	1.00	0.17
	12	3	0.25	0.25	6	0.04	0.50	0.25
	12	3	0.25	0.23	0	0.04	0.25	0.02
	12	3	0.25	0.25	9	0.04	0.63	0.37
	12	3	0.25	0.75	8	0.04	0.58	-0.17
	12	3	0.25	0.50	5	0.04	0.46	-0.04
	12	3	0.25	0.46	16	0.04	0.92	0.46
	12	3	0.25	0.33	2	0.04	0.33	0.00
	12	3	0.25	0.25	17	0.04	0.96	0.71
	12	3	0.25	0.17	11	0.04	0.71	0.54
	12	3	0.25	0.25	14	0.04	0.83	0.58
	12	3	0.25	0.15	8	0.04	0.58	0.43
22150								
	12	3	0.25	0.50	16	0.04	0.92	0.42
	12	3	0.25	0.58	22	0.04	1.00	0.42
	12	3	0.25	0.67	17	0.04	0.96	0.29
	12	3	0.25	0.42	22	0.04	1.00	0.58
	12	3	0.25	0.21	16	0.04	0.92	0.71
	12	3	0.25	0.17	22	0.04	1.00	0.83
	12	3	0.25	0.42	19	0.04	1.00	0.58

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BSN	Ideal Pts	Sect (2)	Ck-In %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
22160								
	12	3	0.25	1.08	39	0.04	1.00	-0.08
	12	3	0.25	1.08	33	0.04	1.00	-0.08
	12	3	0.25	0.79	30	0.04	1.00	0.21
	12	3	0.25	1.08	36	0.04	1.00	-0.08
	12	3	0.25	0.58	24	0.04	1.00	0.42
	12	3	0.25	0.58	30	0.04	1.00	0.42
	12	3	0.25	0.58	27	0.04	1.00	0.42
	12	3	0.25	0.33	9	0.04	0.63	0.29
	12	3	0.25	0.42	12	0.04	0.75	0.33
	12	3	0.25	0.33	6	0.04	0.50	0.17
	12	3	0.25	0.67	19	0.04	1.00	0.33
	12	3	0.25	0.50	13	0.04	0.79	0.29
	12	3	0.25	0.58	11	0.04	0.71	0.13
	12	3	0.25	0.21	8	0.04	0.58	0.37
	12	3	0.25	0.58	17	0.04	0.96	0.38
	12	3	0.25	0.50	11	0.04	0.71	0.21
	12	3	0.25	0.50	14	0.04	0.83	0.33
	12	3	0.25	0.42	19	0.04	1.00	0.58
	12	3	0.25	0.42	16	0.04	0.92	0.50
	12	3	0.25	0.36	2	0.04	0.33	-0.03
	12	3	0.25	0.42	22	0.04	1.00	0.58
22170								
	12	3	0.25	0.42	29	0.04	1.00	0.58
	12	3	0.25	0.21	26	0.04	1.00	0.79
	12	3	0.25	0.58	35	0.04	1.00	0.42
	12	3	0.25	0.50	32	0.04	1.00	0.50
	12	3	0.25	0.50	27	0.04	1.00	0.50
	12	3	0.25	0.92	33	0.04	1.00	0.08
	12	3	0.25	0.50	24	0.04	1.00	0.50
	12	3	0.25	0.50	24	0.04	1.00	0.50
	12	3	0.25	0.58	30	0.04	1.00	0.42
	12	3	0.25	0.17	10	0.04	0.67	0.50
	12	3	0.25	0.50	14	0.04	0.83	0.33
	12	3	0.25	0.67	17	0.04	0.96	0.29
	12	3	0.25	0.67	20	0.04	1.00	0.33
	12	3	0.25	0.67	23	0.04	1.00	0.33
	12	3	0.25	0.42	24	0.04	1.00	0.58
	12	3	0.25	0.83	11	0.04	0.71	-0.12
	12	3	0.25	0.83	8	0.04	0.58	-0.25
	12	3	0.25	0.36	21	0.04	1.00	0.64

BSN	Ideal Pts	Sect (2)	Ck-In %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
22180								
	12	3	0.25	0.25	22	0.04	1.00	0.75
	12	3	0.25	0.14	14	0.04	0.83	0.69
	12	3	0.25	0.33	25	0.04	1.00	0.67
	12	3	0.25	0.50	11	0.04	0.71	0.21
	12	3	0.25	0.50	12	0.04	0.75	0.25
	12	3	0.25	0.92	24	0.04	1.00	0.08
	12	3	0.25	0.50	9	0.04	0.63	0.12
	12	3	0.25	0.58	21	0.04	1.00	0.42
	12	3	0.25	0.42	1	0.04	0.29	-0.13
	12	3	0.25	0.58	24	0.04	1.00	0.42
	12	3	0.25	0.58	27	0.04	1.00	0.42
	12	3	0.25	0.33	21	0.04	1.00	0.67
	12	3	0.25	0.33	18	0.04	1.00	0.67
	12	3	0.25	0.29	12	0.04	0.75	0.46
	12	3	0.25	0.29	12	0.04	0.75	0.46
	12	3	0.25	0.67	15	0.04	0.88	0.20
	12	3	0.25	0.67	18	0.04	1.00	0.33
	12	3	0.25	0.08	25	0.04	1.00	0.92
22190								
	12	3	0.25	0.25	16	0.04	0.92	0.67
	12	3	0.25	0.42	19	0.04	1.00	0.58
	12	3	0.25	0.67	22	0.04	1.00	0.33
	12	3	0.25	0.33	31	0.04	1.00	0.67
	12	3	0.25	0.67	34	0.04	1.00	0.33
	12	3	0.25	0.33	28	0.04	1.00	0.67
	12	3	0.25	0.21	25	0.04	1.00	0.79

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BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
23050								
	22	9	0.41	0.18	4	0.03	0.54	0.36
	22	9	0.41	0.27	0	0.03	0.41	0.14
	22	9	0.41	0.50	7	0.03	0.64	0.14
	22	9	0.41	0.82	13	0.03	0.84	0.02
	22	9	0.41	0.77	3	0.03	0.51	-0.26
	22	9	0.41	0.91	2	0.03	0.47	-0.44
	22	9	0.41	0.50	10	0.03	0.74	0.24
	22	9	0.41	0.95	16	0.03	0.93	-0.02
	22	9	0.41	1.00	6	0.03	0.61	-0.39
	22	9	0.41	0.91	5	0.03	0.57	-0.34
	22	9	0.41	0.73	13	0.03	0.84	0.11
	22	9	0.41	0.95	19	0.03	1.00	0.05
	22	9	0.41	1.00	9	0.03	0.70	-0.30
	22	9	0.41	0.73	8	0.03	0.67	-0.06
	22	9	0.41	0.91	8	0.03	0.67	-0.24
23060								
	22	9	0.41	0.82	22	0.03	1.00	0.18
	22	9	0.41	0.77	13	0.03	0.84	0.07
	22	9	0.41	0.95	20	0.03	1.00	0.05
	22	9	0.41	0.86	6	0.03	0.61	-0.25
	22	9	0.41	0.27	28	0.03	1.00	0.73
	22	9	0.41	0.46	23	0.03	1.00	0.54
	22	9	0.41	0.82	25	0.03	1.00	0.18
	22	9	0.41	0.82	16	0.03	0.93	0.11
	22	9	0.41	0.86	9	0.03	0.70	-0.16
	22	9	0.41	0.27	31	0.03	1.00	0.73
	22	9	0.41	0.86	26	0.03	1.00	0.14
	22	9	0.41	0.82	28	0.03	1.00	0.18
	22	9	0.41	0.82	19	0.03	1.00	0.18
	22	9	0.41	0.23	9	0.03	0.70	0.47
	22	9	0.41	0.86	12	0.03	0.80	-0.06
	22	9	0.41	0.55	34	0.03	1.00	0.45
	22	9	0.41	0.86	29	0.03	1.00	0.14
	22	9	0.41	0.82	31	0.03	1.00	0.18
	22	9	0.41	0.91	22	0.03	1.00	0.09
	22	9	0.41	0.23	12	0.03	0.80	0.57
	22	9	0.41	0.86	15	0.03	0.90	0.04

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
23070								
	22	9	0.41	0.32	25	0.03	1.00	0.68
	22	9	0.41	0.91	36	0.03	1.00	0.09
	22	9	0.41	0.36	3	0.03	0.51	0.15
	22	9	0.41	0.32	10	0.03	0.74	0.42
	22	9	0.41	0.27	10	0.03	0.74	0.47
	22	9	0.41	0.82	25	0.03	1.00	0.18
	22	9	0.41	0.91	39	0.03	1.00	0.09
	22	9	0.41	1.00	6	0.03	0.61	-0.39
	22	9	0.41	0.68	13	0.03	0.84	0.16
	22	9	0.41	0.36	13	0.03	0.84	0.48
	22	9	0.41	0.27	24	0.03	1.00	0.73
	22	9	0.41	0.91	42	0.03	1.00	0.09
	22	9	0.41	1.00	9	0.03	0.70	-0.30
	22	9	0.41	0.86	28	0.03	1.00	0.14
	22	9	0.41	0.77	16	0.03	0.93	0.16
	22	9	0.41	0.50	16	0.03	0.93	0.43
	22	9	0.41	0.50	27	0.03	1.00	0.50
	22	9	0.41	0.91	45	0.03	1.00	0.09
	22	9	0.41	1.00	12	0.03	0.80	-0.20
	22	9	0.41	0.86	31	0.03	1.00	0.14
	22	9	0.41	0.77	19	0.03	1.00	0.23
23080	22	9	0.41	0.38	7	0.03	0.64	0.26
	22	9	0.41	0.36	6	0.03	0.61	0.25
	22	9	0.41	0.23	18	0.03	1.00	0.77
	22	9	0.41	0.36	21	0.03	1.00	0.64
	22	9	0.41	0.41	7	0.03	0.64	0.23

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
23090								
	16	7	0.44	0.38	3	0.03	0.53	0.15
	16	7	0.44	0.62	18	0.03	1.00	0.38
	16	7	0.44	0.25	18	0.03	1.00	0.75
	16	7	0.44	0.31	24	0.03	1.00	0.69
	16	7	0.44	0.50	30	0.03	1.00	0.50
	16	7	0.44	0.12	0	0.03	0.44	0.32
	16	7	0.44	0.62	21	0.03	1.00	0.38
	16	7	0.44	0.50	21	0.03	1.00	0.50
	16	7	0.44	0.38	27	0.03	1.00	0.62
	16	7	0.44	0.56	33	0.03	1.00	0.44
	16	7	0.44	0.19	10	0.03	0.75	0.56
	16	7	0.44	0.44	3	0.03	0.53	0.09
	16	7	0.44	0.75	24	0.03	1.00	0.25
	16	7	0.44	0.63	24	0.03	1.00	0.37
	16	7	0.44	0.50	30	0.03	1.00	0.50
	16	7	0.44	0.56	36	0.03	1.00	0.44
	16	7	0.44	0.19	13	0.03	0.84	0.65
	16	7	0.44	0.88	6	0.03	0.63	-0.26
	16	7	0.44	0.88	27	0.03	1.00	0.12
	16	7	0.44	0.69	27	0.03	1.00	0.31
	16	7	0.44	0.50	33	0.03	1.00	0.50
	16	7	0.44	0.44	5	0.03	0.59	0.15
23100								
	16	7	0.44	1.00	22	0.03	1.00	0
	16	7	0.44	0.56	1	0.03	0.47	-0.09
	16	7	0.44	0.44	0	0.03	0.44	-0.00
	16	7	0.44	0.56	4	0.03	0.56	0.00
	16	7	0.44	0.63	3	0.03	0.53	-0.10
	16	7	0.44	0.63	7	0.03	0.66	0.03
23110								
	22	9	0.41	0.36	8	0.03	0.67	0.31
	22	9	0.41	0.56	1	0.03	0.44	-0.12
	22	9	0.41	0.82	14	0.03	0.87	0.05
	22	9	0.41	0.95	17	0.03	0.97	0.02
23120								
	22	9	0.41	0.86	18	0.03	1.00	0.14
	22	9	0.41	0.86	24	0.03	1.00	0.14
	22	9	0.41	0.82	38	0.03	1.00	0.18

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
23130								
	16	7	0.44	1.12	29	0.03	1.00	-0.12
	16	7	0.44	0.38	16	0.03	0.94	0.56
	16	7	0.44	0.63	19	0.03	1.00	0.37
	16	7	0.44	1.12	35	0.03	1.00	-0.12
	16	7	0.44	0.69	22	0.03	1.00	0.31
	16	7	0.44	0.25	2	0.03	0.50	0.25
	16	7	0.44	0.69	25	0.03	1.00	0.31
23140								
	16	7	0.44	0.31	25	0.03	1.00	0.69
	16	7	0.44	0.38	31	0.03	1.00	0.62
	16	7	0.44	0.38	34	0.03	1.00	0.62
23150								
	16	7	0.44	0.31	25	0.03	1.00	0.69
	16	7	0.44	0.56	12	0.03	0.81	0.25
	16	7	0.44	0.63	15	0.03	0.91	0.28

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BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
23160								
	22	9	0.41	0.86	24	0.03	1.00	0.14
	22	9	0.41	0.86	4	0.03	0.54	-0.32
	22	9	0.41	0.91	27	0.03	1.00	0.09
	22	9	0.41	0.86	27	0.03	1.00	0.14
	22	9	0.41	1.00	7	0.03	0.64	-0.36
	22	9	0.41	1.09	30	0.03	1.00	-0.09
	22	9	0.41	0.86	30	0.03	1.00	0.14
	22	9	0.41	0.95	30	0.03	1.00	0.05
	22	9	0.41	0.68	1	0.03	0.44	-0.24
	22	9	0.41	0.91	33	0.03	1.00	0.09
	22	9	0.41	1.00	0	0.03	0.41	-0.59
23170								
	22	9	0.41	0.32	7	0.03	0.64	0.32
	22	9	0.41	0.32	4	0.03	0.54	0.22
	22	9	0.41	0.91	24	0.03	1.00	0.09
	22	9	0.41	0.50	10	0.03	0.74	0.24
	22	9	0.41	0.50	7	0.03	0.64	0.14
	22	9	0.41	0.91	27	0.03	1.00	0.09
	22	9	0.41	0.77	13	0.03	0.84	0.07
	22	9	0.41	0.50	10	0.03	0.74	0.24
	22	9	0.41	0.68	15	0.03	0.90	0.22
	22	9	0.41	0.77	16	0.03	0.93	0.16
	22	9	0.41	1.00	13	0.03	0.84	-0.16
	22	9	0.41	0.68	18	0.03	1.00	0.32
23190								
	16	7	0.44	0.31	16	0.03	0.94	0.63
	16	7	0.44	0.38	27	0.03	1.00	0.62
	16	7	0.44	0.31	19	0.03	1.00	0.69
	16	7	0.44	0.63	30	0.03	1.00	0.37
	16	7	0.44	0.50	20	0.03	1.00	0.50
	16	7	0.44	0.63	33	0.03	1.00	0.37
	16	7	0.44	0.75	23	0.03	1.00	0.25
23200								
	16	7	0.44	0.31	5	0.03	0.59	0.28
	16	7	0.44	0.56	9	0.03	0.72	0.16
	16	7	0.44	0.73	8	0.03	0.69	-0.04
	16	7	0.44	0.56	12	0.03	0.81	0.25
	16	7	0.44	0.68	11	0.03	0.78	0.10
	16	7	0.44	0.81	19	0.03	1.00	0.19
	16	7	0.44	0.68	14	0.03	0.88	0.19
	16	7	0.44	0.88	22	0.03	1.00	0.12

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
23210								
	16	7	0.44	0.50	17	0.03	0.97	0.47
	16	7	0.44	0.56	4	0.03	0.56	0.00
	16	7	0.44	0.19	30	0.03	1.00	0.81
	16	7	0.44	0.44	24	0.03	1.00	0.56
	16	7	0.44	0.69	20	0.03	1.00	0.31
	16	7	0.44	0.19	41	0.03	1.00	0.81
	16	7	0.44	0.25	10	0.03	0.75	0.50
	16	7	0.44	0.56	33	0.03	1.00	0.44
	16	7	0.44	0.50	27	0.03	1.00	0.50
	16	7	0.44	0.31	15	0.03	0.91	0.60
	16	7	0.44	0.75	44	0.03	1.00	0.25
	16	7	0.44	0.56	13	0.03	0.84	0.28
	16	7	0.44	0.63	36	0.03	1.00	0.37
	16	7	0.44	0.25	14	0.03	0.88	0.62
	16	7	0.44	0.88	18	0.03	1.00	0.12
	16	7	0.44	0.63	16	0.03	0.94	0.31
	16	7	0.44	0.75	39	0.03	1.00	0.25
	16	7	0.44	0.25	14	0.03	0.88	0.62
23220								
	16	7	0.44	0.44	18	0.03	1.00	0.56
	16	7	0.44	0.44	25	0.03	1.00	0.56
	16	7	0.44	0.19	15	0.03	0.91	0.72
	16	7	0.44	0.06	19	0.03	1.00	0.94
	16	7	0.44	0.69	21	0.03	1.00	0.31
	16	7	0.44	0.44	28	0.03	1.00	0.56
	16	7	0.44	0.25	8	0.03	0.69	0.44
	16	7	0.44	0.13	21	0.03	1.00	0.87
	16	7	0.44	0.94	24	0.03	1.00	0.06
	16	7	0.44	0.44	31	0.03	1.00	0.56
	16	7	0.44	0.31	11	0.03	0.78	0.47
	16	7	0.44	0.25	24	0.03	1.00	0.75
	16	7	0.44	0.94	27	0.03	1.00	0.06
	16	7	0.44	0.81	34	0.03	1.00	0.19
	16	7	0.44	0.69	14	0.03	0.88	0.18
	16	7	0.44	0.31	27	0.03	1.00	0.69

Work Center 121

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
24050								
	24	11	0.46	0.96	14	0.03	0.88	-0.08
	24	11	0.46	0.46	9	0.03	0.73	0.27
	24	11	0.46	1.00	28	0.03	1.00	0
	24	11	0.46	0.96	17	0.03	0.97	0.01
	24	11	0.46	1.00	31	0.03	1.00	0
	24	11	0.46	0.21	10	0.03	0.76	0.55
	24	11	0.46	0.71	29	0.03	1.00	0.29
	24	11	0.46	0.21	16	0.03	0.94	0.73
	24	11	0.46	0.38	13	0.03	0.85	0.47
24060								
	24	11	0.46	0.96	28	0.03	1.00	0.04
	24	11	0.46	0.29	4	0.03	0.58	0.29
	24	11	0.46	0.54	5	0.03	0.61	0.07
	24	11	0.46	0.96	31	0.03	1.00	0.04
	24	11	0.46	0.92	8	0.03	0.70	-0.22
	24	11	0.46	0.96	34	0.03	1.00	0.04
	24	11	0.46	0.75	25	0.03	1.00	0.25
	24	11	0.46	0.83	30	0.03	1.00	0.17
	24	11	0.46	0.92	14	0.03	0.88	-0.04
	24	11	0.46	0.96	37	0.03	1.00	0.04
	24	11	0.46	0.54	24	0.03	1.00	0.46
	24	11	0.46	0.54	10	0.03	0.76	0.22
	24	11	0.46	0.92	11	0.03	0.79	-0.13
24070								
	18	9	0.50	0.94	23	0.03	1.00	0.06
	18	9	0.50	0.94	21	0.03	1.00	0.06
	18	9	0.50	0.22	6	0.03	0.67	0.45
	18	9	0.50	0.89	27	0.03	1.00	0.11
	18	9	0.50	1.06	26	0.03	1.00	-0.06
	18	9	0.50	0.33	41	0.03	1.00	0.67
	18	9	0.50	0.50	21	0.03	1.00	0.50
	18	9	0.50	0.72	24	0.03	1.00	0.28
	18	9	0.50	0.78	13	0.03	0.86	0.08
	18	9	0.50	0.28	3	0.03	0.58	0.30
	18	9	0.50	0.89	30	0.03	1.00	0.11
	18	9	0.50	1.28	29	0.03	1.00	-0.28
	18	9	0.50	1.00	27	0.03	1.00	0
	18	9	0.50	0.50	44	0.03	1.00	0.50

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
24080								
	18	9	0.50	0.44	25	0.03	1.00	0.56
	18	9	0.50	0.89	29	0.03	1.00	0.11
	18	9	0.50	0.56	25	0.03	1.00	0.44
	18	9	0.50	0.17	5	0.03	0.64	0.47
	18	9	0.50	0.28	31	0.03	1.00	0.72
	18	9	0.50	0.44	28	0.03	1.00	0.56
	18	9	0.50	0.89	32	0.03	1.00	0.11
	18	9	0.50	0.33	8	0.03	0.72	0.39
	18	9	0.50	0.17	8	0.03	0.72	0.55
	18	9	0.50	0.61	37	0.03	1.00	0.39
	18	9	0.50	0.83	18	0.03	1.00	0.17
	18	9	0.50	1.00	38	0.03	1.00	0
	18	9	0.50	0.78	34	0.03	1.00	0.22
	18	9	0.50	0.28	12	0.03	0.83	0.55
	18	9	0.50	0.56	14	0.03	0.89	0.33
	18	9	0.50	0.33	34	0.03	1.00	0.67
	18	9	0.50	0.44	7	0.03	0.69	0.25
	18	9	0.50	0.89	35	0.03	1.00	0.11
	18	9	0.50	0.72	31	0.03	1.00	0.28
	18	9	0.50	0.50	11	0.03	0.81	0.31
24090								
	18	9	0.50	0.28	9	0.03	0.75	0.47
	18	9	0.50	0.22	12	0.03	0.83	0.61
	18	9	0.50	0.22	5	0.03	0.64	0.42
	18	9	0.50	0.11	16	0.03	0.94	0.83
	18	9	0.50	0.89	26	0.03	1.00	0.11
	18	9	0.50	0.33	12	0.03	0.83	0.50
	18	9	0.50	0.39	8	0.03	0.72	0.33
	18	9	0.50	0.06	17	0.03	0.97	0.91
	18	9	0.50	0.61	13	0.03	0.86	0.25
	18	9	0.50	0.11	12	0.03	0.83	0.72
	18	9	0.50	0.06	23	0.03	1.00	0.94
	18	9	0.50	0.89	29	0.03	1.00	0.11
	18	9	0.50	0.39	15	0.03	0.92	0.53
	18	9	0.50	0.06	20	0.03	1.00	0.94

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
24100								
	18	9	0.50	0.56	9	0.03	0.75	0.19
	18	9	0.50	0.67	6	0.03	0.67	-0.00
	18	9	0.50	0.17	11	0.03	0.81	0.64
	18	9	0.50	0.28	26	0.03	1.00	0.72
	18	9	0.50	0.11	24	0.03	1.00	0.89
	18	9	0.50	0.28	4	0.03	0.61	0.33
	18	9	0.50	0.94	16	0.03	0.94	0.00
	18	9	0.50	0.11	13	0.03	0.86	0.75
	18	9	0.50	0.05	22	0.03	1.00	0.95
	18	9	0.50	0.67	12	0.03	0.83	0.16
	18	9	0.50	0.44	13	0.03	0.86	0.42
	18	9	0.50	0.94	25	0.03	1.00	0.06
	18	9	0.50	0.28	15	0.03	0.92	0.64
	18	9	0.50	0.11	30	0.03	1.00	0.89
	18	9	0.50	0.05	19	0.03	1.00	0.95
	18	9	0.50	0.67	9	0.03	0.75	0.08
	18	9	0.50	0.17	14	0.03	0.89	0.72
	18	9	0.50	0.94	22	0.03	1.00	0.06
	18	9	0.50	0.28	29	0.03	1.00	0.72
	18	9	0.50	0.11	27	0.03	1.00	0.89

Work Center 130

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
25050								
	15	4	0.27	0.73	16	0.04	0.92	0.19
	15	4	0.27	1.00	18	0.04	1.00	0.00
	15	4	0.27	0.80	11	0.04	0.71	-0.09
	15	4	0.27	0.87	11	0.04	0.71	-0.16
	15	4	0.27	0.73	13	0.04	0.80	0.07
	15	4	0.27	0.93	15	0.04	0.88	-0.05
	15	4	0.27	0.47	8	0.04	0.59	0.12
	15	4	0.27	0.73	8	0.04	0.59	-0.14
	15	4	0.27	0.73	22	0.04	1.00	0.27
	15	4	0.27	0.40	4	0.04	0.43	0.03
	15	4	0.27	0.80	17	0.04	0.96	0.16
	15	4	0.27	1.00	17	0.04	0.96	-0.04
	15	4	0.27	0.73	19	0.04	1.00	0.27
	15	4	0.27	1.00	21	0.04	1.00	0
	15	4	0.27	0.80	14	0.04	0.84	0.04
	15	4	0.27	0.87	14	0.04	0.84	-0.03
25060								
	12	2	0.17	1.08	12	0.05	0.72	-0.36
	12	2	0.17	0.75	18	0.05	1.00	0.25
	12	2	0.17	0.25	13	0.05	0.77	0.52
	12	2	0.17	0.25	6	0.05	0.44	0.19
	12	2	0.17	1.08	9	0.05	0.58	-0.50
	12	2	0.17	0.75	15	0.05	0.86	0.11
	12	2	0.17	0.33	20	0.05	1.00	0.67
	12	2	0.17	0.58	39	0.05	1.00	0.42
	12	2	0.17	1.08	18	0.05	1.00	-0.08
	12	2	0.17	0.25	4	0.05	0.35	0.10
	12	2	0.17	0.50	13	0.05	0.77	0.27
	12	2	0.17	1.08	15	0.05	0.86	-0.22
	12	2	0.17	0.75	21	0.05	1.00	0.25
	12	2	0.17	0.33	10	0.05	0.63	0.30
	12	2	0.17	0.25	9	0.05	0.58	0.33
25070								
	9	2	0.22	0.44	8	0.04	0.57	0.13
	9	2	0.22	0.44	7	0.04	0.52	0.08
	9	2	0.22	0.44	5	0.04	0.44	-0.00
	9	2	0.22	0.44	4	0.04	0.40	-0.04
	9	2	0.22	0.44	14	0.04	0.83	0.39
	9	2	0.22	0.67	19	0.04	1.00	0.33
	9	2	0.22	0.44	11	0.04	0.70	0.26
	9	2	0.22	0.44	16	0.04	0.91	0.47

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
26050								
	19	7	0.37	1.05	12	0.04	0.79	-0.26
	19	7	0.37	0.53	26	0.04	1.00	0.47
	19	7	0.37	0.95	12	0.04	0.79	-0.16
	19	7	0.37	1.05	9	0.04	0.68	-0.37
	19	7	0.37	0.68	17	0.04	0.96	0.28
	19	7	0.37	0.74	22	0.04	1.00	0.26
	19	7	0.37	1.05	18	0.04	1.00	-0.05
	19	7	0.37	0.53	14	0.04	0.86	0.33
	19	7	0.37	0.95	18	0.04	1.00	0.05
	19	7	0.37	1.05	15	0.04	0.89	-0.16
	19	7	0.37	0.42	11	0.04	0.75	0.33
	19	7	0.37	0.95	15	0.04	0.89	-0.06
26060								
	17	5	0.29	0.71	12	0.04	0.76	0.05
	17	5	0.29	0.47	10	0.04	0.69	0.22
	17	5	0.29	0.75	15	0.04	0.88	0.13
	17	5	0.29	0.63	13	0.04	0.80	0.17
	17	5	0.29	0.75	18	0.04	1.00	0.25
	17	5	0.29	0.63	16	0.04	0.92	0.29
	17	5	0.29	0.79	21	0.04	1.00	0.21
	17	5	0.29	0.63	19	0.04	1.00	0.37
26070								
	13	5	0.38	0.08	22	0.03	1.00	0.92
	13	5	0.38	0.54	9	0.03	0.69	0.15
	13	5	0.38	1.31	24	0.03	1.00	-0.31
	13	5	0.38	0.62	5	0.03	0.56	-0.06
	13	5	0.38	0.38	9	0.03	0.69	0.31
	13	5	0.38	0.08	25	0.03	1.00	0.92
	13	5	0.38	0.54	12	0.03	0.79	0.25
	13	5	0.38	0.69	8	0.03	0.66	-0.03
	13	5	0.38	0.38	12	0.03	0.79	0.41
	13	5	0.38	0.08	28	0.03	1.00	0.92
	13	5	0.38	0.54	15	0.03	0.90	0.36
	13	5	0.38	1.46	30	0.03	1.00	-0.46
	13	5	0.38	0.85	29	0.03	1.00	0.15
	13	5	0.38	0.15	31	0.03	1.00	0.85
	13	5	0.38	0.62	18	0.03	1.00	0.38
	13	5	0.38	1.46	33	0.03	1.00	-0.46
	13	5	0.38	0.85	32	0.03	1.00	0.15
	13	5	0.38	0.15	21	0.03	1.00	0.85

Work Center 140

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
27050								
	22	7	0.32	0.41	31	0.04	1.00	0.59
	22	7	0.32	0.41	2	0.04	0.39	-0.02
	22	7	0.32	0.55	5	0.04	0.51	-0.04
	22	7	0.32	0.55	11	0.04	0.73	0.18
	22	7	0.32	0.55	8	0.04	0.62	0.07
27060								
	22	7	0.32	0.68	3	0.04	0.43	-0.25
	22	7	0.32	0.36	11	0.04	0.73	0.37
	22	7	0.32	0.73	24	0.04	1.00	0.27
	22	7	0.32	0.77	6	0.04	0.55	-0.22
	22	7	0.32	0.50	12	0.04	0.77	0.27
	22	7	0.32	0.77	16	0.04	0.92	0.15
	22	7	0.32	0.82	18	0.04	1.00	0.18
	22	7	0.32	0.77	63	0.04	1.00	0.23
	22	7	0.32	0.77	9	0.04	0.66	-0.11
	22	7	0.32	0.82	15	0.04	0.89	0.07
	22	7	0.32	0.68	30	0.04	1.00	0.32

Work Center 210

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
30050								
	24	11	0.46	0.92	27	0.03	1.00	0.08
	24	11	0.46	0.63	29	0.03	1.00	0.37
	24	11	0.46	0.29	3	0.03	0.55	0.26
	24	11	0.46	0.92	30	0.03	1.00	0.08
	24	11	0.46	0.92	37	0.03	1.00	0.08
	24	11	0.46	0.54	19	0.03	1.00	0.46
	24	11	0.46	0.92	33	0.03	1.00	0.08
	24	11	0.46	0.63	22	0.03	1.00	0.37
30075								
	23	11	0.48	0.61	8	0.03	0.71	0.10
30080								
	24	11	0.46	1.00	23	0.03	1.00	0
	24	11	0.46	0.92	19	0.03	1.00	0.08
	24	11	0.46	0.50	25	0.03	1.00	0.50
	24	11	0.46	0.50	28	0.03	1.00	0.50
	24	11	0.46	0.75	29	0.03	1.00	0.25
	24	11	0.46	0.63	40	0.03	1.00	0.37
	24	11	0.46	0.92	25	0.03	1.00	0.08
	24	11	0.46	0.50	31	0.03	1.00	0.50
	24	11	0.46	0.75	32	0.03	1.00	0.25
	24	11	0.46	0.63	43	0.03	1.00	0.37
	24	11	0.46	0.92	28	0.03	1.00	0.08
	24	11	0.46	0.54	34	0.03	1.00	0.46
30100								
	20	9	0.45	0.70	12	0.03	0.82	0.12
	20	9	0.45	0.70	15	0.03	0.91	0.21
	20	9	0.45	0.85	15	0.03	0.91	0.06
30110								
	18	9	0.50	0.72	14	0.03	0.89	0.17
	18	9	0.50	0.78	17	0.03	0.97	0.19
	18	9	0.50	0.72	26	0.03	1.00	0.28
	18	9	0.50	0.89	20	0.03	1.00	0.11
	18	9	0.50	0.56	0	0.03	0.50	-0.06

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
30120								
	18	9	0.50	0.67	30	0.03	1.00	0.33
	18	9	0.50	0.78	18	0.03	1.00	0.22
	18	9	0.50	0.44	21	0.03	1.00	0.56
	18	9	0.50	0.83	33	0.03	1.00	0.17
	18	9	0.50	0.17	12	0.03	0.83	0.66
	18	9	0.50	0.78	21	0.03	1.00	0.22
	18	9	0.50	0.56	24	0.03	1.00	0.44
	18	9	0.50	0.72	8	0.03	0.72	0.00
	18	9	0.50	0.28	15	0.03	0.92	0.64
	18	9	0.50	0.83	24	0.03	1.00	0.17
	18	9	0.50	0.56	27	0.03	1.00	0.44
	18	9	0.50	0.78	11	0.03	0.81	0.03
	18	9	0.50	0.33	18	0.03	1.00	0.67
	18	9	0.50	0.83	27	0.03	1.00	0.17
	18	9	0.50	0.28	7	0.03	0.69	0.41
30125								
	18	9	0.50	0.39	8	0.03	0.72	0.33
	18	9	0.50	0.39	11	0.03	0.81	0.42
30130								
	18	9	0.50	0.33	31	0.03	1.00	0.67
	18	9	0.50	0.44	5	0.03	0.64	0.20
	18	9	0.50	0.33	34	0.03	1.00	0.67
	18	9	0.50	0.67	8	0.03	0.72	0.05
	18	9	0.50	0.44	10	0.03	0.78	0.34
	18	9	0.50	0.61	13	0.03	0.86	0.25
	18	9	0.50	0.28	6	0.03	0.67	0.39
	18	9	0.50	0.33	14	0.03	0.89	0.56

Work Center 220

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
31050								
	20	7	0.35	0.50	9	0.04	0.68	0.17
	20	7	0.35	0.95	19	0.04	1.00	0.05
	20	7	0.35	0.65	1	0.04	0.39	-0.26
	20	7	0.35	1.00	23	0.04	1.00	0
	20	7	0.35	0.10	7	0.04	0.60	0.50
	20	7	0.35	0.50	12	0.04	0.78	0.28
	20	7	0.35	1.00	22	0.04	1.00	0
	20	7	0.35	1.00	26	0.04	1.00	0
	20	7	0.35	0.75	29	0.04	1.00	0.25
	20	7	0.35	0.65	15	0.04	0.89	0.24
	20	7	0.35	1.00	25	0.04	1.00	0
	20	7	0.35	0.80	4	0.04	0.49	-0.31
	20	7	0.35	0.85	0	0.04	0.35	-0.50
	20	7	0.35	0.15	13	0.04	0.82	0.67
	20	7	0.35	0.65	18	0.04	1.00	0.35
	20	7	0.35	1.00	28	0.04	1.00	0
	20	7	0.35	0.80	7	0.04	0.60	-0.20
	20	7	0.35	0.85	3	0.04	0.46	-0.39
	20	7	0.35	0.30	16	0.04	0.93	0.63
31060								
	20	7	0.35	0.30	7	0.04	0.60	0.30
	20	7	0.35	0.50	14	0.04	0.86	0.36
	20	7	0.35	0.50	28	0.04	1.00	0.50
	20	7	0.35	0.90	6	0.04	0.57	-0.33
	20	7	0.35	0.85	10	0.04	0.71	-0.14
	20	7	0.35	0.50	17	0.04	0.96	0.46
	20	7	0.35	0.50	31	0.04	1.00	0.50
	20	7	0.35	0.90	9	0.04	0.68	-0.23
	20	7	0.35	0.85	13	0.04	0.82	-0.03
	20	7	0.35	0.50	20	0.04	1.00	0.50
	20	7	0.35	0.60	4	0.04	0.49	-0.11
	20	7	0.35	0.90	12	0.04	0.78	-0.12
	20	7	0.35	0.90	16	0.04	0.93	0.03
	20	7	0.35	0.70	23	0.04	1.00	0.30
	20	7	0.35	0.60	7	0.04	0.60	0.00
	20	7	0.35	1.00	15	0.04	0.89	-0.11

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
31070								
	20	7	0.35	0.60	7	0.04	0.60	0.00
	20	7	0.35	0.25	12	0.04	0.78	0.53
	20	7	0.35	0.65	28	0.04	1.00	0.35
	20	7	0.35	0.35	5	0.04	0.53	0.18
	20	7	0.35	0.70	15	0.04	0.89	0.19
	20	7	0.35	0.70	31	0.04	1.00	0.30
	20	7	0.35	0.55	8	0.04	0.64	0.09
	20	7	0.35	0.80	23	0.04	1.00	0.20
	20	7	0.35	0.70	18	0.04	1.00	0.30
	20	7	0.35	0.70	14	0.04	0.86	0.16
	20	7	0.35	0.55	11	0.04	0.75	0.20
	20	7	0.35	0.80	26	0.04	1.00	0.20
	20	7	0.35	0.70	21	0.04	1.00	0.30
	20	7	0.35	0.85	3	0.04	0.46	-0.39
31080								
	14	5	0.36	0.43	22	0.04	1.00	0.57
	14	5	0.36	0.64	16	0.04	0.93	0.29
	14	5	0.36	0.29	17	0.04	0.96	0.67
	14	5	0.36	0.43	36	0.04	1.00	0.57
	14	5	0.36	0.79	25	0.04	1.00	0.21
	14	5	0.36	0.50	11	0.04	0.75	0.25
	14	5	0.36	0.71	19	0.04	1.00	0.29
	14	5	0.36	0.43	39	0.04	1.00	0.57
	14	5	0.36	0.93	31	0.04	1.00	0.07
	14	5	0.36	0.36	4	0.04	0.50	0.14
	14	5	0.36	0.50	3	0.04	0.46	-0.04
	14	5	0.36	0.36	23	0.04	1.00	0.64
	14	5	0.36	0.86	42	0.04	1.00	0.14
	14	5	0.36	1.00	34	0.04	1.00	0
	14	5	0.36	0.43	7	0.04	0.61	0.18
	14	5	0.36	0.36	0	0.04	0.36	-0.00
	14	5	0.36	0.43	26	0.04	1.00	0.57
	14	5	0.36	0.86	45	0.04	1.00	0.14

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
31090								
	14	5	0.36	0.57	31	0.04	1.00	0.43
	14	5	0.36	0.79	23	0.04	1.00	0.21
	14	5	0.36	0.86	20	0.04	1.00	0.14
	14	5	0.36	0.21	3	0.04	0.46	0.25
	14	5	0.36	0.79	26	0.04	1.00	0.21
	14	5	0.36	1.00	22	0.04	1.00	0
	14	5	0.36	0.57	6	0.04	0.57	0.00
	14	5	0.36	0.79	29	0.04	1.00	0.21
	14	5	0.36	1.21	25	0.04	1.00	-0.21
	14	5	0.36	0.79	9	0.04	0.68	-0.11
	14	5	0.36	0.21	3	0.04	0.46	0.25
	14	5	0.36	1.29	28	0.04	1.00	-0.29
31100								
	14	5	0.36	0.79	19	0.04	1.00	0.21
	14	5	0.36	0.71	22	0.04	1.00	0.29
	14	5	0.36	0.36	6	0.04	0.57	0.21
	14	5	0.36	1.00	31	0.04	1.00	0
	14	5	0.36	0.79	22	0.04	1.00	0.21
	14	5	0.36	0.21	41	0.04	1.00	0.79
	14	5	0.36	0.71	25	0.04	1.00	0.29
	14	5	0.36	0.86	22	0.04	1.00	0.14
	14	5	0.36	1.00	34	0.04	1.00	0
	14	5	0.36	1.00	25	0.04	1.00	0
	14	5	0.36	0.71	17	0.04	0.96	0.25
	14	5	0.36	0.36	38	0.04	1.00	0.64
	14	5	0.36	0.93	25	0.04	1.00	0.07
	14	5	0.36	1.00	37	0.04	1.00	0
	14	5	0.36	1.00	28	0.04	1.00	0
	14	5	0.36	0.71	20	0.04	1.00	0.29
	14	5	0.36	0.50	41	0.04	1.00	0.50
	14	5	0.36	1.00	28	0.04	1.00	0
	14	5	0.36	0.50	10	0.04	0.71	0.21

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
31110								
	14	5	0.36	0.21	13	0.04	0.82	0.61
	14	5	0.36	0.64	5	0.04	0.54	-0.10
	14	5	0.36	0.64	19	0.04	1.00	0.36
	14	5	0.36	0.36	16	0.04	0.93	0.57
	14	5	0.36	0.29	14	0.04	0.86	0.57
	14	5	0.36	0.64	8	0.04	0.64	0.00
	14	5	0.36	0.64	26	0.04	1.00	0.36
	14	5	0.36	0.36	19	0.04	1.00	0.64
	14	5	0.36	0.29	22	0.04	1.00	0.71
	14	5	0.36	0.64	11	0.04	0.75	0.11
	14	5	0.36	0.64	8	0.04	0.64	0.00
	14	5	0.36	0.36	22	0.04	1.00	0.64
	14	5	0.36	0.57	25	0.04	1.00	0.43
	14	5	0.36	0.50	17	0.04	0.96	0.46
	14	5	0.36	0.71	11	0.04	0.75	0.04
31120								
	14	5	0.36	0.29	2	0.04	0.43	0.14
	14	5	0.36	0.29	18	0.04	1.00	0.71
	14	5	0.36	0.50	5	0.04	0.54	0.04
	14	5	0.36	0.50	21	0.04	1.00	0.50
	14	5	0.36	0.57	8	0.04	0.64	0.07
	14	5	0.36	0.71	24	0.04	1.00	0.29
	14	5	0.36	0.14	26	0.04	1.00	0.86
31130								
	14	5	0.36	0.14	14	0.04	0.86	0.72
	14	5	0.36	0.29	1	0.04	0.39	0.10
	14	5	0.36	0.50	1	0.04	0.39	-0.11
	14	5	0.36	0.57	34	0.04	1.00	0.43
	14	5	0.36	0.14	17	0.04	0.96	0.82
	14	5	0.36	0.29	4	0.04	0.50	0.21
	14	5	0.36	0.29	19	0.04	1.00	0.71
	14	5	0.36	0.71	37	0.04	1.00	0.29
	14	5	0.36	0.29	20	0.04	1.00	0.71
	14	5	0.36	0.50	7	0.04	0.61	0.11
	14	5	0.36	0.43	22	0.04	1.00	0.57
	14	5	0.36	0.14	25	0.04	1.00	0.86
	14	5	0.36	0.36	5	0.04	0.54	0.18

Work Center 230

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
32050								
	19	7	0.37	0.84	2	0.04	0.44	-0.40
	19	7	0.37	0.53	6	0.04	0.58	0.05
	19	7	0.37	0.47	14	0.04	0.86	0.39
	19	7	0.37	1.00	22	0.04	1.00	0
	19	7	0.37	0.79	16	0.04	0.93	0.14
	19	7	0.37	0.95	5	0.04	0.54	-0.41
	19	7	0.37	1.00	9	0.04	0.68	-0.32
	19	7	0.37	1.11	25	0.04	1.00	-0.11
	19	7	0.37	1.05	19	0.04	1.00	-0.05
	19	7	0.37	0.95	8	0.04	0.65	-0.30
	19	7	0.37	1.00	12	0.04	0.79	-0.21
	19	7	0.37	0.58	20	0.04	1.00	0.42
	19	7	0.37	1.11	28	0.04	1.00	-0.11
	19	7	0.37	1.05	22	0.04	1.00	-0.05
	19	7	0.37	0.95	11	0.04	0.75	-0.20
	19	7	0.37	1.00	15	0.04	0.89	-0.11
	19	7	0.37	0.58	23	0.04	1.00	0.42
	19	7	0.37	1.11	31	0.04	1.00	-0.11
32060								
	19	7	0.37	0.89	33	0.04	1.00	0.11
	19	7	0.37	1.00	32	0.04	1.00	0
	19	7	0.37	1.11	36	0.04	1.00	-0.11
	19	7	0.37	1.00	35	0.04	1.00	0
	19	7	0.37	0.53	3	0.04	0.47	-0.06
	19	7	0.37	1.11	39	0.04	1.00	-0.11
	19	7	0.37	0.89	4	0.04	0.51	-0.38
	19	7	0.37	0.68	6	0.04	0.58	-0.10
	19	7	0.37	1.11	42	0.04	1.00	-0.11
	19	7	0.37	1.00	7	0.04	0.61	-0.39

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
32070								
	13	5	0.38	0.46	21	0.03	1.00	0.54
	13	5	0.38	0.62	0	0.03	0.38	-0.24
	13	5	0.38	0.77	11	0.03	0.76	-0.01
	13	5	0.38	0.46	6	0.03	0.59	0.13
	13	5	0.38	0.46	14	0.03	0.86	0.40
	13	5	0.38	0.31	33	0.03	1.00	0.69
	13	5	0.38	0.62	3	0.03	0.49	-0.13
	13	5	0.38	0.77	14	0.03	0.86	0.09
	13	5	0.38	0.62	9	0.03	0.69	0.07
	13	5	0.38	0.46	17	0.03	0.97	0.51
	13	5	0.38	0.32	36	0.03	1.00	0.68
	13	5	0.38	0.77	6	0.03	0.59	-0.18
	13	5	0.38	0.77	17	0.03	0.97	0.20
	13	5	0.38	1.08	12	0.03	0.79	-0.29
	13	5	0.38	0.54	20	0.03	1.00	0.46
	13	5	0.38	0.54	39	0.03	1.00	0.46
	13	5	0.38	0.85	9	0.03	0.69	-0.16
	13	5	0.38	1.00	30	0.03	1.00	0
	13	5	0.38	1.08	15	0.03	0.90	-0.18
32080								
	13	5	0.38	0.23	8	0.03	0.66	0.43
	13	5	0.38	0.92	36	0.03	1.00	0.08
	13	5	0.38	0.23	11	0.03	0.76	0.53
	13	5	0.38	1.23	27	0.03	1.00	-0.23
	13	5	0.38	0.31	14	0.03	0.86	0.55
	13	5	0.38	0.08	13	0.03	0.83	0.75
	13	5	0.38	1.23	30	0.03	1.00	-0.23
	13	5	0.38	0.15	6	0.03	0.59	0.44
	13	5	0.38	0.31	16	0.03	0.93	0.62
	13	5	0.38	0.15	3	0.03	0.49	0.34

Work Center 270

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
35070								
	24	11	0.46	0.25	5	0.03	0.61	0.36
	24	11	0.46	0.38	2	0.03	0.52	0.14
	24	11	0.46	0.43	8	0.03	0.70	0.27
	24	11	0.46	0.38	5	0.03	0.61	0.23
	24	11	0.46	0.43	11	0.03	0.79	0.36
	24	11	0.46	0.46	11	0.03	0.79	0.33
	24	11	0.46	0.38	8	0.03	0.70	0.32
	24	11	0.46	0.46	14	0.03	0.88	0.42
	24	11	0.46	0.58	6	0.03	0.64	0.06
	24	11	0.46	0.50	11	0.03	0.79	0.29
	24	11	0.46	0.46	17	0.03	0.97	0.51
35080								
	24	11	0.46	0.33	23	0.03	1.00	0.67
	24	11	0.46	0.88	20	0.03	1.00	0.12
	24	11	0.46	0.88	23	0.03	1.00	0.12
	24	11	0.46	0.92	26	0.03	1.00	0.08
	24	11	0.46	0.46	14	0.03	0.88	0.42
35090								
	18	9	0.50	0.61	17	0.03	0.97	0.36
	18	9	0.50	0.22	11	0.03	0.81	0.59
	18	9	0.50	1.00	27	0.03	1.00	0
	18	9	0.50	0.28	14	0.03	0.89	0.61
	18	9	0.50	0.22	14	0.03	0.89	0.67
	18	9	0.50	0.33	17	0.03	0.97	0.64
	18	9	0.50	0.22	17	0.03	0.97	0.75
	18	9	0.50	0.39	20	0.03	1.00	0.61
35100								
	18	9	0.50	0.33	35	0.03	1.00	0.67
	18	9	0.50	0.67	18	0.03	1.00	0.33
	18	9	0.50	0.11	38	0.03	1.00	0.89
	18	9	0.50	0.67	21	0.03	1.00	0.33
	18	9	0.50	0.67	24	0.03	1.00	0.33
	18	9	0.50	0.78	27	0.03	1.00	0.22

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
35105								
	18	9	0.50	1.06	24	0.03	1.00	-0.06
	18	9	0.50	1.06	30	0.03	1.00	-0.06
	18	9	0.50	1.06	33	0.03	1.00	-0.06
35110								
	18	9	0.50	0.61	18	0.03	1.00	0.39
	18	9	0.50	0.67	34	0.03	1.00	0.33
	18	9	0.50	0.72	37	0.03	1.00	0.28
	18	9	0.50	0.61	40	0.03	1.00	0.39
	18	9	0.50	0.72	40	0.03	1.00	0.28
	18	9	0.50	0.78	27	0.03	1.00	0.22
	18	9	0.50	0.56	20	0.03	1.00	0.44
35130								
	18	9	0.50	0.50	37	0.03	1.00	0.50
	18	9	0.50	0.28	17	0.03	0.97	0.69
	18	9	0.50	0.11	8	0.03	0.72	0.61

Work Center 310

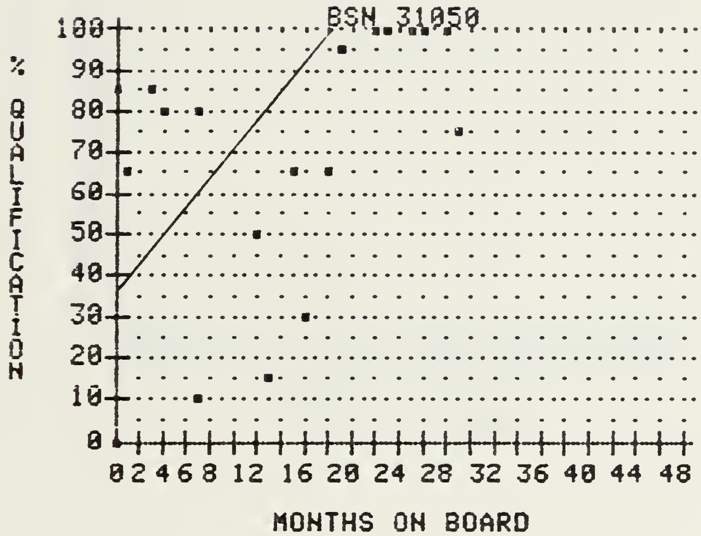
BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
39000								
	11	4	0.36	0.64	4	0.04	0.51	-0.13
	11	4	0.36	0.82	7	0.04	0.61	-0.21
	11	4	0.36	0.82	10	0.04	0.72	-0.10
	11	4	0.36	0.91	13	0.04	0.82	-0.09
39070								
	7	1	0.14	0.29	13	0.05	0.76	0.47
	7	1	0.14	0.86	19	0.05	1.00	0.14
	7	1	0.14	1.00	6	0.05	0.43	-0.57
	7	1	0.14	1.00	9	0.05	0.57	-0.43
	7	1	0.14	0.43	11	0.05	0.67	0.24
	7	1	0.14	0.71	2	0.05	0.24	-0.47
	7	1	0.14	0.71	5	0.05	0.38	-0.33
	7	1	0.14	0.86	14	0.05	0.81	-0.05
	7	1	0.14	0.86	17	0.05	0.95	0.09
	7	1	0.14	0.86	20	0.05	1.00	0.14
	7	1	0.14	0.86	23	0.05	1.00	0.14
	7	1	0.14	0.29	18	0.05	1.00	0.71
	7	1	0.14	0.29	15	0.05	0.86	0.57
	7	1	0.14	0.71	21	0.05	1.00	0.29
	7	1	0.14	0.71	7	0.05	0.48	-0.23
39080								
	7	1	0.14	1.00	17	0.05	0.95	-0.05
	7	1	0.14	1.00	14	0.05	0.81	-0.19
	7	1	0.14	1.00	20	0.05	1.00	0
	7	1	0.14	1.00	23	0.05	1.00	0
	7	1	0.14	0.29	25	0.05	1.00	0.71
	7	1	0.14	0.29	22	0.05	1.00	0.71
	7	1	0.14	0.29	8	0.05	0.52	0.23
	7	1	0.14	0.71	11	0.05	0.67	-0.04
	7	1	0.14	0.29	8	0.05	0.52	0.23
	7	1	0.14	0.29	5	0.05	0.38	0.09
	7	1	0.14	0.29	4	0.05	0.33	0.04
	7	1	0.14	0.43	3	0.05	0.29	-0.14
	7	1	0.14	0.43	8	0.05	0.52	0.09
	7	1	0.14	0.43	6	0.05	0.43	-0.00
	7	1	0.14	0.43	9	0.05	0.57	0.14
	7	1	0.14	0.71	16	0.05	0.90	0.19
	7	1	0.14	0.71	9	0.05	0.57	-0.14
	7	1	0.14	0.71	22	0.05	1.00	0.29
	7	1	0.14	0.71	12	0.05	0.71	0.00

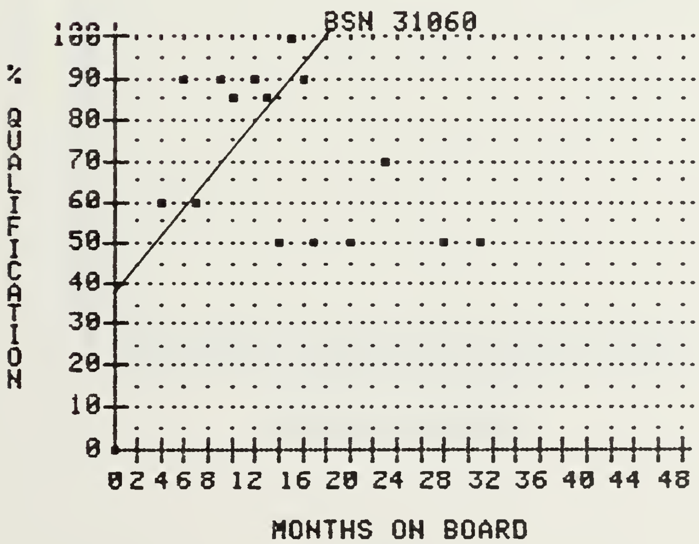
BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
39090								
	7	1	0.14	0.29	28	0.05	1.00	0.71
	7	1	0.14	0.86	24	0.05	1.00	0.14
	7	1	0.14	0.86	27	0.05	1.00	0.14
	7	1	0.14	0.86	30	0.05	1.00	0.14
	7	1	0.14	0.43	11	0.05	0.67	0.24
	7	1	0.14	0.43	19	0.05	1.00	0.57
	7	1	0.14	0.86	22	0.05	1.00	0.14
	7	1	0.14	0.86	27	0.05	1.00	0.14
	7	1	0.14	0.86	21	0.05	1.00	0.14
	7	1	0.14	0.86	24	0.05	1.00	0.14
	7	1	0.14	0.86	30	0.05	1.00	0.14
39100								
	7	1	0.14	0.29	21	0.05	1.00	0.71
	7	1	0.14	0.29	24	0.05	1.00	0.71
	7	1	0.14	0.29	4	0.05	0.33	0.04
	7	1	0.14	0.86	19	0.05	1.00	0.14
	7	1	0.14	1.00	22	0.05	1.00	0
	7	1	0.14	0.86	13	0.05	0.76	-0.10
	7	1	0.14	0.43	10	0.05	0.62	0.19
	7	1	0.14	0.43	13	0.05	0.76	0.33
	7	1	0.14	0.43	7	0.05	0.48	0.05
	7	1	0.14	0.43	4	0.05	0.33	-0.10
	7	1	0.14	0.86	18	0.05	1.00	0.14
	7	1	0.14	0.43	15	0.05	0.86	0.43
	7	1	0.14	0.29	8	0.05	0.52	0.23
	7	1	0.14	0.43	37	0.05	1.00	0.57
39110								
	7	1	0.14	0.86	7	0.05	0.48	-0.38
	7	1	0.14	0.86	10	0.05	0.62	-0.24
	7	1	0.14	0.71	26	0.05	1.00	0.29
	7	1	0.14	0.71	29	0.05	1.00	0.29
	7	1	0.14	0.71	13	0.05	0.76	0.05
	7	1	0.14	0.29	19	0.05	1.00	0.71
	7	1	0.14	0.43	22	0.05	1.00	0.57
	7	1	0.14	0.86	34	0.05	1.00	0.14
	7	1	0.14	0.43	7	0.05	0.48	0.05
	7	1	0.14	0.86	10	0.05	0.62	-0.24
	7	1	0.14	0.43	1	0.05	0.19	-0.24
	7	1	0.14	0.43	4	0.05	0.33	-0.10

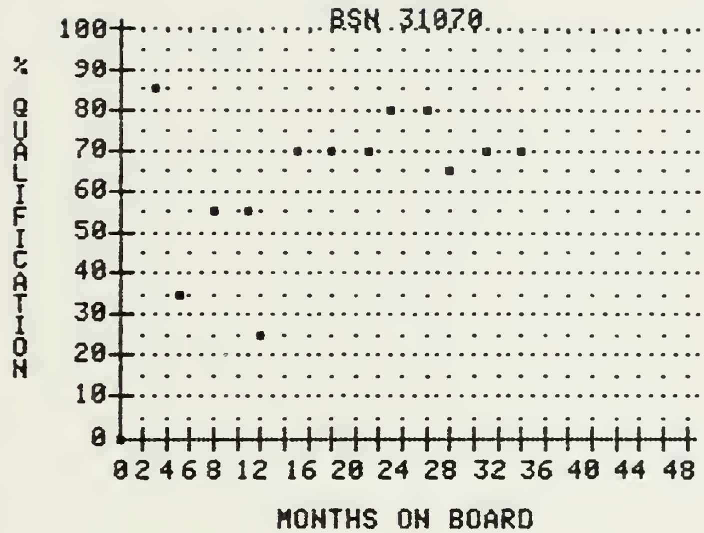
BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
39120								
	7	1	0.14	0.29	6	0.05	0.43	0.14
	7	1	0.14	0.29	9	0.05	0.57	0.28
	7	1	0.14	0.29	3	0.05	0.29	-0.00
	7	1	0.14	1.00	22	0.05	1.00	0
	7	1	0.14	0.86	16	0.05	0.90	0.04
	7	1	0.14	0.86	13	0.05	0.76	-0.10
	7	1	0.14	0.86	19	0.05	1.00	0.14
	7	1	0.14	0.86	23	0.05	1.00	0.14
	7	1	0.14	0.86	20	0.05	1.00	0.14
	7	1	0.14	0.43	14	0.05	0.81	0.38
	7	1	0.14	0.43	17	0.05	0.95	0.52
	7	1	0.14	0.86	26	0.05	1.00	0.14
	7	1	0.14	0.86	20	0.05	1.00	0.14
	7	1	0.14	1.00	29	0.05	1.00	0
	7	1	0.14	0.86	8	0.05	0.52	-0.34
	7	1	0.14	0.43	11	0.05	0.67	0.24
	7	1	0.14	0.29	8	0.05	0.52	0.23
	7	1	0.14	0.43	8	0.05	0.52	0.09
39130								
	7	1	0.14	0.86	6	0.05	0.43	-0.43
	7	1	0.14	0.86	8	0.05	0.52	-0.34
	7	1	0.14	0.86	11	0.05	0.67	-0.19
	7	1	0.14	0.43	3	0.05	0.29	-0.14
	7	1	0.14	0.71	2	0.05	0.24	-0.47
	7	1	0.14	0.71	18	0.05	1.00	0.29
	7	1	0.14	0.71	15	0.05	0.86	0.15
	7	1	0.14	0.71	5	0.05	0.38	-0.33
	7	1	0.14	0.29	2	0.05	0.24	-0.05
	7	1	0.14	0.29	8	0.05	0.52	0.23
	7	1	0.14	0.43	6	0.05	0.43	-0.00
	7	1	0.14	0.29	4	0.05	0.33	0.04
39150								
	7	1	0.14	0.86	14	0.05	0.81	-0.05
	7	1	0.14	1.00	17	0.05	0.95	-0.05
	7	1	0.14	0.29	2	0.05	0.24	-0.05
	7	1	0.14	0.29	21	0.05	1.00	0.71
	7	1	0.14	0.29	4	0.05	0.33	0.04
	7	1	0.14	0.71	7	0.05	0.48	-0.23
	7	1	0.14	0.71	10	0.05	0.62	-0.09

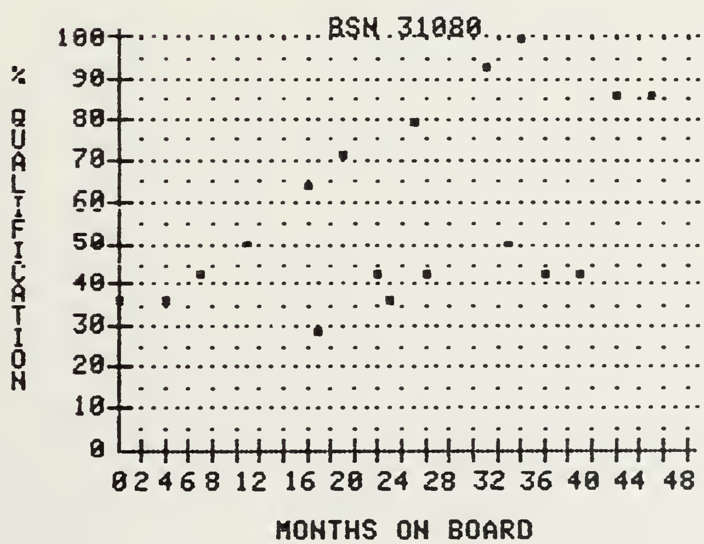
APPENDIX E

BILLET SEQUENCE NUMBER GRAPHS






BSN 31070
% QUALIFICATION
100
90
80
70
60
50
40
30
20
10
0
0 2 4 6 8 12 16 20 24 28 32 36 40 44 48
MONTHS ON BOARD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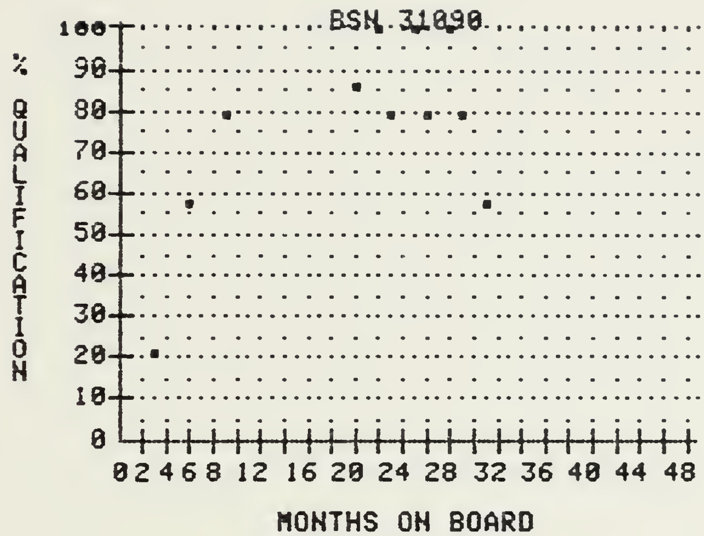
MONTHS ON BOARD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40
30
20
10
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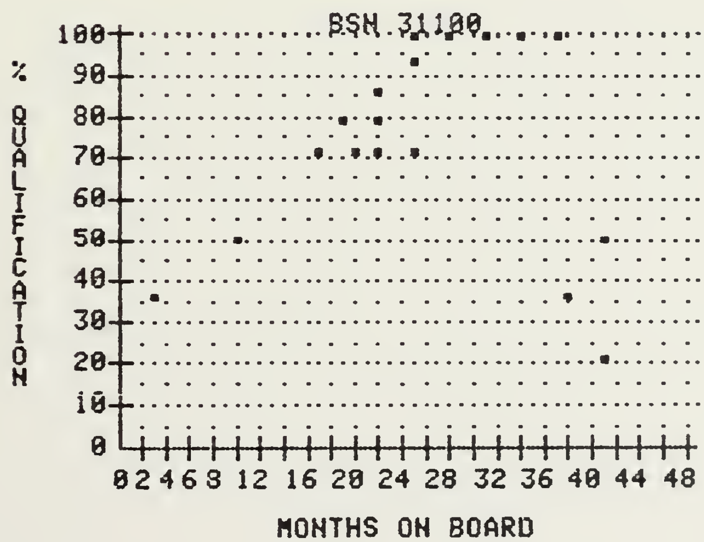
MONTHS ON BOARD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% QUALIFICATION
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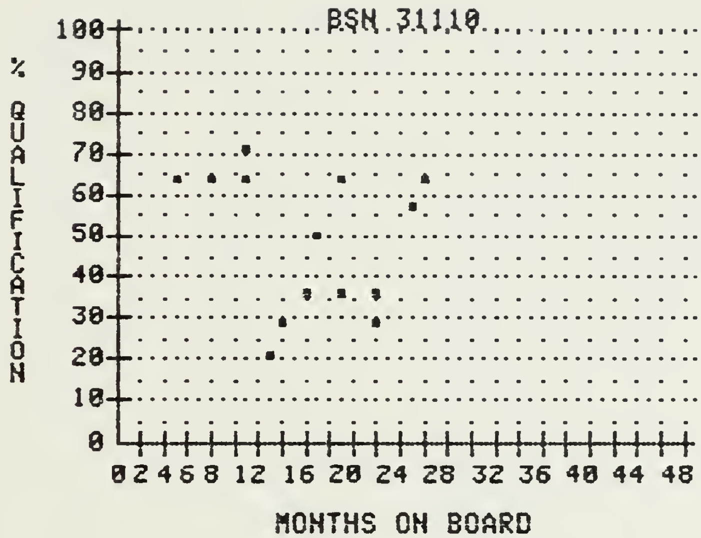
MONTHS ON BOARD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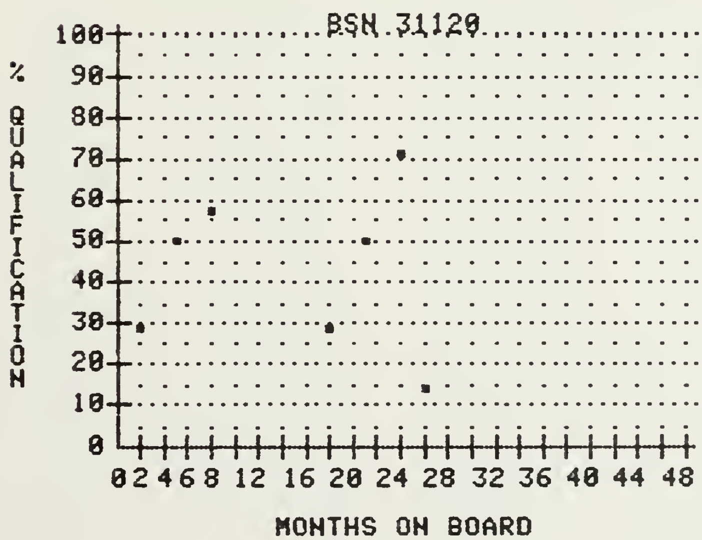
MONTHS ON BOARD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10
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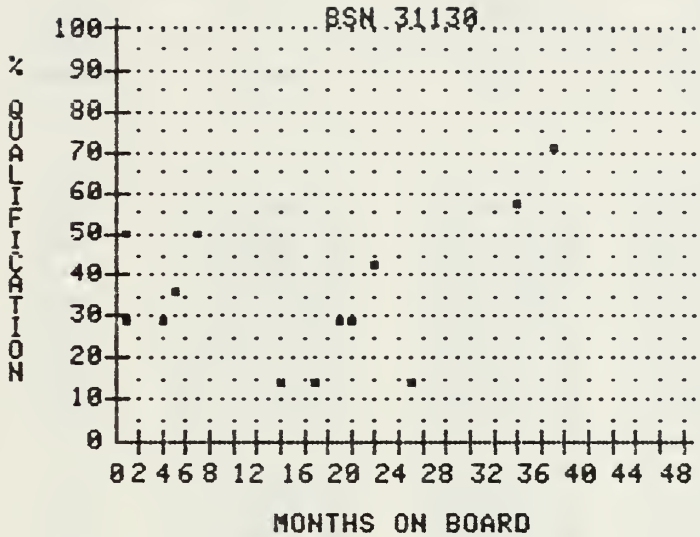
MONTHS ON BOARD



BSN 31130
% QUALIFICATION
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80
70
60
50
40
30
20
10
0
0 2 4 6 8 12 16 20 24 28 32 36 40 44 48
MONTHS ON BOARD

APPENDIX F

BILLET LIFE CYCLE COST

RATING	PAY GRADE	YEARS One	Two	Three
ABH	E-2	18,638.00	35,581.64	50,984.94
ABH	E-3	19,758.00	37,719.82	54,048.74
ABH	E-4	18,548.00	35,409.82	50,738.74
ABH	E-5	18,745.00	35,785.91	51,277.64
ABH	E-6	22,270.00	42,515.45	60,920.41
ABH	E-7	25,100.00	47,918.18	68,661.98
ABH	E-8	28,104.00	53,653.09	76,879.54
ABH	E-9	31,447.00	60,035.18	86,024.44
AD	E-2	14,425.00	27,538.64	39,460.12
AD	E-3	15,365.00	29,333.18	42,031.53
AD	E-4	16,345.00	31,204.09	44,712.36
AD	E-5	18,680.00	35,661.82	51,099.83
AD	E-6	23,167.00	44,227.91	63,374.19
AD	E-7	25,574.00	48,823.09	69,958.63
AD	E-8	28,774.00	54,932.18	78,712.35
AD	E-9	31,893.00	60,886.64	87,244.49
AE	E-2	16,368.00	31,248.00	44,775.27
AE	E-3	17,278.00	32,985.27	47,264.61
AE	E-4	18,018.00	34,398.00	49,288.91
AE	E-5	18,316.00	34,966.91	50,104.10
AE	E-6	22,859.00	43,639.91	62,531.64
AE	E-7	25,880.00	49,407.27	70,795.70
AE	E-8	28,233.00	53,899.36	77,232.42
AE	E-9	31,893.00	60,886.64	87,244.49
AK	E-2	15,139.00	28,901.73	41,413.30
AK	E-3	16,395.00	31,299.55	44,849.13
AK	E-4	16,479.00	31,459.91	45,078.92
AK	E-5	18,414.00	35,154.00	50,372.18
AK	E-6	22,721.00	43,376.45	62,154.14
AK	E-7	25,310.00	48,319.09	69,236.45
AK	E-8	27,966.00	53,389.64	76,502.03
AK	E-9	31,563.00	60,256.64	86,341.76

BILLET LIFE CYCLE COST

RATING	PAY GRADE	YEARS One	Two	Three
AME	E-2	12,632.00	24,115.64	34,555.31
AME	E-3	13,725.00	26,202.27	37,545.25
AME	E-4	15,057.00	28,745.18	41,188.98
AME	E-5	17,345.00	33,113.18	47,447.89
AME	E-6	22,773.00	43,475.73	62,296.39
AME	E-7	25,126.00	47,967.82	68,733.11
AME	E-8	27,831.00	53,131.91	76,132.74
AME	E-9	31,571.00	60,271.91	86,363.64
AMH	E-2	15,607.00	29,795.18	42,693.53
AMH	E-3	17,052.00	32,553.82	46,646.38
AMH	E-4	17,101.00	32,647.36	46,780.42
AMH	E-5	18,741.00	35,778.27	51,266.70
AMH	E-6	22,566.00	43,080.55	61,730.13
AMH	E-7	25,381.00	48,454.64	69,430.67
AMH	E-8	27,831.00	53,131.91	76,132.74
AMH	E-9	31,571.00	60,271.91	86,363.64
AMS	E-2	15,604.00	29,789.45	42,685.32
AMS	E-3	17,082.00	32,611.09	46,728.45
AMS	E-4	17,082.00	32,611.09	46,728.45
AMS	E-5	18,627.00	35,560.64	50,954.85
AMS	E-6	22,535.00	43,021.36	61,645.33
AMS	E-7	25,743.00	49,145.73	70,420.93
AMS	E-8	27,831.00	53,131.91	76,132.74
AMS	E-9	31,571.00	60,271.91	86,363.64
AO	E-2	15,504.00	29,598.55	42,411.77
AO	E-3	17,047.00	32,544.27	46,632.70
AO	E-4	16,920.00	32,301.82	46,285.29
AO	E-5	17,988.00	34,340.73	49,206.84
AO	E-6	22,638.00	43,218.00	61,927.09
AO	E-7	25,771.00	49,199.18	70,497.53
AO	E-8	28,929.00	55,228.09	79,136.36
AO	E-9	31,608.00	60,342.55	86,464.86

BILLET LIFE CYCLE COST

RATING	PAY GRADE	YEARS One	Two	Three
AT	E-2	18,304.00	34,944.00	50,071.27
AT	E-3	19,220.00	36,692.73	52,577.02
AT	E-4	21,590.00	41,217.27	59,060.25
AT	E-5	20,158.00	38,483.45	55,142.96
AT	E-6	23,717.00	45,277.91	64,878.74
AT	E-7	26,710.00	50,991.82	73,066.20
AT	E-8	28,719.00	54,827.18	78,561.89
AT	E-9	31,893.00	60,886.64	87,244.49
AX	E-2	18,603.00	35,514.82	50,889.20
AX	E-3	21,235.00	40,539.55	58,089.13
AX	E-4	21,961.00	41,925.55	60,075.13
AX	E-5	20,514.00	39,163.09	56,116.81
AX	E-6	22,469.00	42,895.36	61,464.79
AX	E-7	25,920.00	49,483.64	70,905.12
AX	E-8	29,144.00	55,638.55	79,724.50
AX	E-9	31,893.00	60,886.64	87,244.49
AZ	E-2	14,853.00	28,355.73	40,630.93
AZ	E-3	15,756.00	30,079.64	43,101.12
AZ	E-4	16,129.00	30,791.73	44,121.48
AZ	E-5	18,490.00	35,299.09	50,580.08
AZ	E-6	23,330.00	44,539.09	63,820.08
AZ	E-7	24,956.00	47,643.27	68,268.07
AZ	E-8	28,421.00	54,258.27	77,746.70
AZ	E-9	31,583.00	60,294.82	86,396.47
PR	E-2	13,693.00	26,141.18	37,457.71
PR	E-3	14,596.00	27,865.09	39,927.90
PR	E-4	15,999.00	30,543.55	43,765.86
PR	E-5	18,798.00	35,887.09	51,422.63
PR	E-6	23,126.00	44,149.64	63,262.03
PR	E-7	25,538.00	48,754.36	69,860.15
PR	E-8	28,039.00	53,529.00	76,701.73
PR	E-9	31,583.00	60,294.82	86,396.47

BILLET LIFE CYCLE COST

RATING	PAY GRADE	YEARS		
		One	Two	Three
AA	E-2	11,407.00	21,777.00	31,204.27
AN	E-3	11,298.00	21,568.91	30,906.10

APPENDIX G

DOLLAR VALUE OF QUALIFICATION & TRAINING DEVIATION

BILLET SEQUENCE NUMBER	RATE & RATING	AVERAGE DEVIATION	BILLET LIFE CYCLE COST	DOLLAR VALUE OF DEVIATION
16050	AVCM	-0.20	87,244.49	0
16060	ADCS	0.21	78,712.35	16,529.59
16070	ATC	-0.04	73,066.20	0
16150	AZ1	0.43	63,820.08	27,442.63
16160	AZ2	0.24	50,580.08	12,139.22
16170	AZ3	0.48	44,121.48	21,178.31
16180	AZ3	0.31	44,121.48	13,677.66
16190	AZAN	-0.11	43,101.12	0
16200	AZAN	0.21	43,101.12	9,051.24
17050	AZ2	0.49	50,580.08	24,784.24
18050	AXCS	-0.07	79,724.50	0
18060	AD1	0.20	63,374.19	12,674.84
18070	AE1	0.40	62,531.64	25,012.66
18080	AME1	0.53	62,296.39	33,017.09
18090	AMS1	0.25	61,645.33	15,411.33
18100	AT1	0.43	64,878.74	27,897.86
18200	AO1	0.34	61,927.09	21,055.21
18210	AZ3	0.04	44,121.48	1,764.86
18250	AZ1	0.08	63,820.08	5,105.61
19050	AK1	0.48	62,154.14	29,833.99
19060	AK2	0.48	50,372.18	24,178.65
19070	AK2	0.49	50,372.18	24,682.37
19080	AK3	0.66	45,078.92	29,752.09
19100	AKAN	0.41	44,849.13	18,388.14
19110	AKAN	0.50	44,849.13	22,424.57
19500	AK2	0.73	50,372.18	36,771.69
19510	AN	0.44	30,906.10	13,598.68
19520	AN	0.27	30,906.10	8,344.65
19530	AN	0.34	30,906.10	10,508.07
21050	AMCS	-0.07	76,132.74	0
22050	ADC	-0.26	69,958.63	0
22060	AD1	-0.15	63,374.19	0
22080	AD2	0.20	51,099.83	10,219.97
22090	AD2	0.06	51,099.83	3,065.99
22100	AD2	0.31	51,099.83	15,840.95
22110	AD3	0.28	44,712.36	12,519.46
22120	AD3	0.06	44,712.36	2,682.74

BILLET SEQUENCE NUMBER	RATE & RATING	AVERAGE DEVIATION	BILLET LIFE CYCLE COST	DOLLAR VALUE OF DEVIATION
22130	AD3	0.36	44,712.36	16,096.45
22140	AD3	0.30	44,712.36	13,413.71
22150	ADAN	0.55	42,031.53	23,117.34
22160	ADAN	0.27	42,031.53	11,348.51
22170	ADAN	0.28	42,031.53	11,768.83
22180	ADAN	0.42	42,031.53	17,653.24
22190	ADAN	0.58	42,031.53	24,378.29
23050	AMSC	-0.07	70,420.93	0
23060	AMH1	0.29	61,730.13	17,901.74
23070	AMH2	0.21	51,266.70	10,766.01
23080	AMH2	0.43	51,266.70	22,044.68
23090	AMH3	0.38	46,780.42	17,776.56
23100	AMH3	-0.30	46,780.42	0
23110	AMHAN	0.06	46,646.38	2,798.78
23120	AMHAN	0.15	46,646.38	6,996.96
23130	AMHAN	0.22	46,646.38	10,262.20
23140	AMHAN	0.64	46,646.38	29,853.68
23150	AMHAN	0.41	46,646.38	19,125.02
23160	AMS1	-0.09	61,645.33	0
23170	AMS2	0.16	50,954.85	8,152.78
23190	AMS3	0.49	46,728.45	22,896.94
23200	AMS3	0.16	46,728.45	7,476.55
23210	AMSAN	0.43	46,728.45	20,093.23
23220	AMSAN	0.50	46,728.45	23,364.23
24050	AMS1	0.25	61,645.33	15,411.33
24060	AMS2	0.09	50,954.85	4,585.94
24070	AMS3	0.20	46,728.45	9,345.69
24080	AMS3	0.36	46,728.45	16,822.24
24090	AMSAN	0.55	46,728.45	25,700.65
24100	AMSAN	0.50	46,728.45	23,364.23
25050	PR2	0.04	51,422.63	2,056.91
25060	PR3	0.15	43,765.86	6,564.88
25070	PRAN	0.20	39,927.90	7,985.58
26050	AME1	0.06	62,296.39	3,737.78
26060	AME2	0.21	47,447.89	9,964.06
26070	AME3	0.29	41,188.98	11,944.80
27050	AMS1	0.16	61,645.33	9,863.25
27060	AD1	0.12	63,374.19	7,604.90
29050	ATCS	-0.01	78,561.89	0
30050	AT1	0.22	64,878.74	14,273.32
30075	AT2	0.10	55,142.96	5,514.30
30080	AT2	0.29	55,142.96	15,991.46

BILLET SEQUENCE NUMBER	RATE & RATING	AVERAGE DEVIATION	BILLET LIFE CYCLE COST	DOLLAR VALUE OF DEVIATION
30100	AT3	0.13	59,060.25	7,677.83
30110	AT3	0.14	59,060.25	8,268.44
30120	ATAN	0.34	52,577.02	17,876.19
30125	ATAN	0.37	52,577.02	19,453.50
30130	ATAN	0.39	52,577.02	20,505.04
31050	AE1	0.08	62,531.64	5,002.53
31060	AE2	0.12	50,104.10	6,012.49
31070	AE2	0.18	50,104.10	9,018.74
31080	AE3	0.29	49,288.91	14,293.78
31090	AE3	0.09	49,288.91	4,436.00
31100	AE3	0.22	49,288.91	10,843.56
31110	AEAN	0.36	47,264.61	17,015.26
31120	AEAN	0.37	47,264.61	17,487.91
31130	AEAN	0.43	47,264.61	20,323.78
32050	AO1	-0.05	61,927.09	0
32060	AO2	-0.11	49,206.84	0
32070	AO3	0.16	46,285.29	7,405.65
32080	AOAN	0.33	46,632.70	15,388.79
35070	AX1	0.30	61,464.79	18,439.44
35080	AX2	0.28	56,116.81	15,712.71
35090	AX3	0.53	60,075.13	31,839.82
35100	AX3	0.46	60,075.13	27,634.56
35105	AX3	-0.06	60,075.13	0
35110	AXAN	0.33	58,089.13	19,169.41
35130	AXAN	0.60	58,089.13	34,853.48
37050	AEC	0.03	70,795.70	2,123.87
39000	ABH1	-0.13	60,920.41	0
39060	ABH3	0.05	50,738.74	2,536.94
39080	AN	0.11	30,906.10	3,399.67
39090	AN	0.24	30,906.10	7,417.46
39100	AN	0.24	30,906.10	7,417.46
39110	AN	0.07	30,906.10	2,163.43
39120	AN	0.12	30,906.10	3,708.73
39130	AN	-0.10	30,906.10	0
39150	AN	0.04	30,906.10	1,236.24

APPENDIX H

WC 220 DEVIATION SUMMARY REPORT (MOD)

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
31050								
	20	10	0.50	0.50	9	0.03	0.75	0.25
	20	10	0.50	0.95	19	0.03	1.00	0.05
	20	10	0.50	0.65	1	0.03	0.53	-0.12
	20	10	0.50	1.00	23	0.03	1.00	0
	20	10	0.50	0.10	7	0.03	0.69	0.59
	20	10	0.50	0.50	12	0.03	0.83	0.33
	20	10	0.50	1.00	22	0.03	1.00	0
	20	10	0.50	1.00	26	0.03	1.00	0
	20	10	0.50	0.75	29	0.03	1.00	0.25
	20	10	0.50	0.65	15	0.03	0.92	0.27
	20	10	0.50	1.00	25	0.03	1.00	0
	20	10	0.50	0.80	4	0.03	0.61	-0.19
	20	10	0.50	0.85	0	0.03	0.50	-0.35
	20	10	0.50	0.15	13	0.03	0.86	0.71
	20	10	0.50	0.65	18	0.03	1.00	0.35
	20	10	0.50	1.00	28	0.03	1.00	0
	20	10	0.50	0.80	7	0.03	0.69	-0.11
	20	10	0.50	0.85	3	0.03	0.58	-0.27
	20	10	0.50	0.30	16	0.03	0.94	0.64
31060								
	20	10	0.50	0.30	7	0.03	0.69	0.39
	20	10	0.50	0.50	14	0.03	0.89	0.39
	20	10	0.50	0.50	28	0.03	1.00	0.50
	20	10	0.50	0.90	6	0.03	0.67	-0.23
	20	10	0.50	0.85	10	0.03	0.78	-0.07
	20	10	0.50	0.50	17	0.03	0.97	0.47
	20	10	0.50	0.50	31	0.03	1.00	0.50
	20	10	0.50	0.90	9	0.03	0.75	-0.15
	20	10	0.50	0.85	13	0.03	0.86	0.01
	20	10	0.50	0.50	20	0.03	1.00	0.50
	20	10	0.50	0.60	4	0.03	0.61	0.01
	20	10	0.50	0.90	12	0.03	0.83	-0.07
	20	10	0.50	0.90	16	0.03	0.94	0.04
	20	10	0.50	0.70	23	0.03	1.00	0.30
	20	10	0.50	0.60	7	0.03	0.69	0.09
	20	10	0.50	1.00	15	0.03	0.92	-0.08

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
31070								
	20	10	0.50	0.60	7	0.03	0.69	0.09
	20	10	0.50	0.25	12	0.03	0.83	0.58
	20	10	0.50	0.65	28	0.03	1.00	0.35
	20	10	0.50	0.35	5	0.03	0.64	0.29
	20	10	0.50	0.70	15	0.03	0.92	0.22
	20	10	0.50	0.70	31	0.03	1.00	0.30
	20	10	0.50	0.55	8	0.03	0.72	0.17
	20	10	0.50	0.80	23	0.03	1.00	0.20
	20	10	0.50	0.70	18	0.03	1.00	0.30
	20	10	0.50	0.70	14	0.03	0.89	0.19
	20	10	0.50	0.55	11	0.03	0.81	0.26
	20	10	0.50	0.80	26	0.03	1.00	0.20
	20	10	0.50	0.70	21	0.03	1.00	0.30
	20	10	0.50	0.85	3	0.03	0.58	-0.27
31080								
	14	8	0.57	0.43	22	0.02	1.00	0.57
	14	8	0.57	0.64	16	0.02	0.95	0.31
	14	8	0.57	0.29	17	0.02	0.98	0.69
	14	8	0.57	0.43	36	0.02	1.00	0.57
	14	8	0.57	0.79	25	0.02	1.00	0.21
	14	8	0.57	0.50	11	0.02	0.83	0.33
	14	8	0.57	0.71	19	0.02	1.00	0.29
	14	8	0.57	0.43	39	0.02	1.00	0.57
	14	8	0.57	0.93	31	0.02	1.00	0.07
	14	8	0.57	0.36	4	0.02	0.67	0.31
	14	8	0.57	0.50	3	0.02	0.64	0.14
	14	8	0.57	0.36	23	0.02	1.00	0.64
	14	8	0.57	0.86	42	0.02	1.00	0.14
	14	8	0.57	1.00	34	0.02	1.00	0
	14	8	0.57	0.43	7	0.02	0.74	0.31
	14	8	0.57	0.36	0	0.02	0.57	0.21
	14	8	0.57	0.43	26	0.02	1.00	0.57
	14	8	0.57	0.86	45	0.02	1.00	0.14

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
31090								
	14	8	0.57	0.57	31	0.02	1.00	0.43
	14	8	0.57	0.79	23	0.02	1.00	0.21
	14	8	0.57	0.86	20	0.02	1.00	0.14
	14	8	0.57	0.21	3	0.02	0.64	0.43
	14	8	0.57	0.79	26	0.02	1.00	0.21
	14	8	0.57	1.00	22	0.02	1.00	0
	14	8	0.57	0.57	6	0.02	0.71	0.14
	14	8	0.57	0.79	29	0.02	1.00	0.21
	14	8	0.57	1.21	25	0.02	1.00	-0.21
	14	8	0.57	0.79	9	0.02	0.79	-0.00
	14	8	0.57	0.21	3	0.02	0.64	0.43
	14	8	0.57	1.29	28	0.02	1.00	-0.29
31100								
	14	8	0.57	0.79	19	0.02	1.00	0.21
	14	8	0.57	0.71	22	0.02	1.00	0.29
	14	8	0.57	0.36	6	0.02	0.71	0.35
	14	8	0.57	1.00	31	0.02	1.00	0
	14	8	0.57	0.79	22	0.02	1.00	0.21
	14	8	0.57	0.21	41	0.02	1.00	0.79
	14	8	0.57	0.71	25	0.02	1.00	0.29
	14	8	0.57	0.86	22	0.02	1.00	0.14
	14	8	0.57	1.00	34	0.02	1.00	0
	14	8	0.57	1.00	25	0.02	1.00	0
	14	8	0.57	0.71	17	0.02	0.98	0.27
	14	8	0.57	0.36	38	0.02	1.00	0.64
	14	8	0.57	0.93	25	0.02	1.00	0.07
	14	8	0.57	1.00	37	0.02	1.00	0
	14	8	0.57	1.00	28	0.02	1.00	0
	14	8	0.57	0.71	20	0.02	1.00	0.29
	14	8	0.57	0.50	41	0.02	1.00	0.50
	14	8	0.57	1.00	28	0.02	1.00	0
	14	8	0.57	0.50	10	0.02	0.81	0.31

BSN	Ideal Pts	Sect (2)	Ck-in %	%	Mths Onbd	Slope (m)	Target %	Dev (d)
31110								
	14	8	0.57	0.21	13	0.02	0.88	0.67
	14	8	0.57	0.64	5	0.02	0.69	0.05
	14	8	0.57	0.64	19	0.02	1.00	0.36
	14	8	0.57	0.36	16	0.02	0.95	0.59
	14	8	0.57	0.29	14	0.02	0.90	0.61
	14	8	0.57	0.64	8	0.02	0.76	0.12
	14	8	0.57	0.64	26	0.02	1.00	0.36
	14	8	0.57	0.36	19	0.02	1.00	0.64
	14	8	0.57	0.29	22	0.02	1.00	0.71
	14	8	0.57	0.64	11	0.02	0.83	0.19
	14	8	0.57	0.64	8	0.02	0.76	0.12
	14	8	0.57	0.36	22	0.02	1.00	0.64
	14	8	0.57	0.57	25	0.02	1.00	0.43
	14	8	0.57	0.50	17	0.02	0.98	0.48
	14	8	0.57	0.71	11	0.02	0.83	0.12
31120								
	14	8	0.57	0.29	2	0.02	0.62	0.33
	14	8	0.57	0.29	18	0.02	1.00	0.71
	14	8	0.57	0.50	5	0.02	0.69	0.19
	14	8	0.57	0.50	21	0.02	1.00	0.50
	14	8	0.57	0.57	8	0.02	0.76	0.19
	14	8	0.57	0.71	24	0.02	1.00	0.29
	14	8	0.57	0.14	26	0.02	1.00	0.86
31130								
	14	8	0.57	0.14	14	0.02	0.90	0.76
	14	8	0.57	0.29	1	0.02	0.60	0.31
	14	8	0.57	0.50	1	0.02	0.60	0.10
	14	8	0.57	0.57	34	0.02	1.00	0.43
	14	8	0.57	0.14	17	0.02	0.98	0.84
	14	8	0.57	0.29	4	0.02	0.67	0.38
	14	8	0.57	0.29	19	0.02	1.00	0.71
	14	8	0.57	0.71	37	0.02	1.00	0.29
	14	8	0.57	0.29	20	0.02	1.00	0.71
	14	8	0.57	0.50	7	0.02	0.74	0.24
	14	8	0.57	0.43	22	0.02	1.00	0.57
	14	8	0.57	0.14	25	0.02	1.00	0.86
	14	8	0.57	0.36	5	0.02	0.69	0.33

APPENDIX I

MANAGEMENT OF ENLISTED MANPOWER

DEPARTMENT OF THE NAVY
COMMANDER PATROL WING TEN
NAVAL AIR STATION
MOFFETT FIELD, CA 94035

COMPATWINGTENINST 5320.2
Code 10
7 September 1982

COMPATWING TEN INSTRUCTION 5320.2

Subj: Management of Enlisted Manpower

Ref: (a) NAVMILPERSCOMINST 1080.1
(b) OPNAV 1000/2 (Manpower Authorization)
(c) OPNAVINST 1000.16E
(d) EDVR (EPMAC 1080)
(e) NAVPERS 18068D (NEC Manual)
(f) EPMACINST 1080.4 (DMRS Manual)

Encl: (1) Guide for the Use of the Manpower Management Planning Worksheet
(2) Manpower Management/Personnel Accounting/ATSS Organization within Personnel Offices
(3) Guideline for EDVR Update and Corrections
(4) Guideline for Submission of NEC Changes
(5) PATWING TEN Enlisted Manpower Management Team
(6) References

1. Purpose. To establish and promulgate policy regarding the management of enlisted personnel assigned to Patrol Wing TEN squadrons. This instruction provides guidance for the management of aircrew, maintenance, and other administrative support personnel in addition to the currently existing manpower management systems in references (a) through (f). The training guidelines provided in enclosures (1) through (4) will enable Patrol Wing TEN squadrons to keep proper records and utilize the Aviation Training Support System (ATSS) to its fullest extent.

2. Discussion. Enlisted personnel allowances are based on CNO approved billets (BA) from reference (b) and SQMD requirements. A detailed description and change procedures for reference (b) are contained in reference (c). The Enlisted Distribution Verification Report (EDVR), reference (d), is a monthly report of the unit's personnel account reflecting individual assignments against authorizations in reference (b). The EDVR also contains the squadron's fair share of available manpower for each rate and rating according to the Navy Manning Plan (NMP). Reference (a) contains the format description and procedures for the verification of the EDVR. Reference (e) contains a listing of the Navy Enlisted Classification (NEC) Codes required to support P-3 squadrons. Reference (f) contains a description for preparation and submission of diary messages to EPMAC New Orleans, LA.

3. Background. References (a) through (e) assign ultimate responsibility for administrative actions and management of all assets to the Commanding Officer. Historically, the Personnel Officer has the responsibility of ensuring that all administrative actions are completed and complied with for matters involving enlisted manpower management, with Department Heads providing necessary information to accomplish the goals of training, cross-training and internal management of their own personnel. Routine manpower meetings between Department Heads, Division Officers, Personnel Officers and Manpower Management Representatives are essential in order to

continuously maintain the line of communication in identifying manning problems. Crisis management, improperly submitted Personnel Manning Reports (PERSMARs), and the requirement for COMPATWINGSPAC to submit Manning Assistance requests can be avoided if careful attention to proper manpower management is implemented by the command.

3. Action

a. Policy. Commanding Officers will ensure the preparation of a current manpower management planning worksheet for those billets contained in reference (b). These worksheets will be updated/revised as changes occur in reference (d) for further incorporation into the Aviation Training Support System (ATSS). A sample planning worksheet is included as page 4 of enclosure (1) and a basic guideline is provided as page 2 of enclosure (1) for completion of the worksheet. Prior to completion of the worksheet, management attention must be directed toward ensuring the EDVR is correct and updated using enclosure (3) as the basic guideline for EDVR upkeep. Every effort must be made to match the qualifications of an individual, as reflected in the corrected/verified EDVR, with the requirements/authorization of a specific billet contained in the Manpower Authorization (OPNAV 1000/2). Submission of DNEC/NEC/RATE/PRD/EAOS and other EDVR-related changes must be accomplished by the Personnel Office prior to completing the worksheet. Careful attention to this personnel management program will reduce the need for verifying and correcting errors in the ATSS data base. A more intimate knowledge of the Navy's Manpower Management System by Branch and Division Officers will improve their managerial skills and will result in an improved manning posture for the squadron. To accomplish this goal and closely monitor manpower management within Patrol Wing TEN squadrons on a routine basis, the Patrol Wing TEN Manpower Management Team has been established to train and assist Personnel Officers, Office Supervisors and ATSS Personnelmen in implementing and maintaining this program. Function and composition of this team is outlined in enclosure (5). Enclosure (6) is provided for information.

W. D. Altman

W. D. AXTMAN
Chief Staff Officer

Distribution:
COMPATWINGTENINST 5216.1
List A, C(1); Case II

GENERAL GUIDE FOR THE USE OF THE MANPOWER MANAGEMENT PLANNING WORKSHEET

The worksheet has been designed to allow the manager to insert pertinent data from two different sources for a comparison of authorized rates/skills vs on-board rates/skills. The primary purpose of the worksheet is to identify manpower/skill shortages and EDVR errors. As can be seen in enclosure (1), page 4, the data for the first five columns is extracted from the Manpower Authorization (OPNAV 1000/2). The remaining data blocks are extracted from the EDVR. This system enables the manager to assess the manpower situation for any particular rating at a glance. Used properly, the worksheet identifies the training required for an individual and serves as a tickler system for the identification of a relief, serves as a long-range manpower management system, and identifies errors in the EDVR.

Proper management of personnel assets must be based on careful consideration of squadron requirements (as contained in the Manpower Authorization), the skills/skill level of assigned personnel as reflected in the EDVR, and the myriad alternatives available to the manager to balance requirements with on board assets. No single method of achieving optimum results in this endeavor can be said to be the "right way."

In the example contained in enclosure (1), page 5, the Manpower Authorization (OPNAV 1000/2) was carefully screened for all AD authorized billets (non-aircrew). These billets were entered on the worksheet in the first five columns. The EDVR was then carefully reviewed for the AD rating (excluding flight crew personnel). Each entry on the EDVR was balanced against the requirements (authorization) contained in the first five (5) columns. Every effort was made to match on-board assets in terms of actual rate, distribution NEC, actual PNEC and/or SNEC against the authorized requirements. It should be noted that in a large majority of cases only an approximation can be accomplished. Once the worksheet has been filled out, many errors/management alternatives become highly visible.

It should be also noted that initial assignment of an individual to a specific Billet Sequence Code (BSC) does not preclude the manager from changing this assignment at some future date as an individual's skill/experience level changes. Such actions are to be expected of the manager who is attempting to make optimum use of available assets. These changes are expected and encouraged provided the EDVR is changed to reflect the requirements of the billet(s) vacated by such "in-house" reassignments. Care should also be taken to list all personnel assigned "in excess" to billets authorized in the MPA. These personnel can, and should, be trained to fill billets for which no relief has been specifically identified. This document is subject to change. It is important to ensure the Manpower Management Planning Worksheet reflects current Billets Authorized (BA) as reflected in the latest issue of the MPA (OPNAV 1000/2).

Page 6 of enclosure (1) can be utilized to indicate manning projections (current on-boards and projected on-boards) up to seven months. Numerical figures can then be updated to reflect incoming personnel when advance Enlisted Personnel Action Documents (EPADs) and messages are received.

PROCEDURES FOR THE CONSOLIDATION OF MANPOWER AUTHORIZATION AND EDVR

(using AD manning as example)

STEP ONE: From EDVR, determine total BA for AD's.

STEP TWO: Extract from MPA, in billet sequence numerical order, most senior AD Billet Sequence Code (BSC), billet title, authorized PNEC/SNEC and BA in that order and transcribe on first five (5) columns of worksheet, (i.e. 16060, ADCS, Maint/Prod Ctl Coord., 8319/0000, 1). Transcribe all this information ending with most junior BSC in numerical sequence.

STEP THREE:

Carefully review, balance and extract from EDVR the AD rating (excluding flight crew personnel) and match on-board assets in terms of actual rate, distributed NEC, actual PNEC/SNEC, assigned rate, individual assigned. PRD and EAOS against authorized requirements. Prospective gains should be included on the worksheet as it can then be easily determined if modified enroute training is necessary.

**It is essential that Maintenance assist in this process since the Maintenance Training Officer can eliminate much of the "guess work" by the Personnel Office in the proper assignment of personnel to required BSC's.

PROSPECTIVE GAINS. (Item 80 on the ATSS)

Manpower management involves not only current on-board assets but also management of prospective gains. In order that the qualifications and appropriate training are obtained by the personnel reporting to PATWING TEN squadrons, the Squadron Manning Roster will be utilized as a tool to identify prospective gains. The following administrative action must be accomplished by the Personnel Office using the ATSS:

(1) Upon receipt of messages or an Enlisted Personnel Action Document (EPAD) on incoming personnel, a skeleton service record will be entered in the ATSS Data Base transcribing the following information necessary for the Manning Roster:

(a) Social Security Number (Item 3)

(b) Last Name (Item 5)

(c) First Name (Item 6)

(d) Middle Initial (Item 7)

(e) Rate (Item 8)

(f) Primary NEC (Item 16)

(g)	Secondary NEC	(Item 17)
(h)	Distributed NEC	(Item 19)
(i)	BSN (Distributed)	(Item 24) (Based on open billet in OPNAV 1000/2)
(j)	PRD	(Item 50)
(k)	EAOS	(Item 51)
(l)	Enter PG on W/C	(Item 80)

Once actions required above are completed, the Manning Roster should reflect the appropriate billets for all enlisted personnel (on-board and incoming). Manning deficiencies can then be identified and appropriate action can be initiated by the squadron either by informal communication with CNMPC/EPMAC or appropriate reports (UPLR/Manning Deficiency Report).

(________ RATING)

From Manpower Authorization (OPNAV 1000/2)						From EDVR (EPMAC EDVR 1080)							
Billet Sequence Code	Auth Rate	Billet Title	Authorized		No. of BA	DNEC	Actual		Assign Rate	Individual Assigned	PRD	EAOS	Remarks
			PNEC	SNEC			PNEC	SNEC					
Column 18	Co. 19	Column 22	Column 23		32	Co. K	Column L		Co. J	Column E	Co. U	Co. S	

(AD RATING)

From Manpower Authorization (OPNAV 1000/2)						From EDVR (EDVR 1080)							
Billet Sequence	Auth Rate	Billet Title	Auth PNEC	Auth SNEC	BA	Dist NEC	Actual PNEC	Actual SNEC	Assigned Rate	Individual Assigned	PRD	EADS	Remarks
Column 18	Column 19	Column 22	Column 23		Column 32	Column K	Column L		Column J	Column E	Column U	Column S	
00280	AD1	ASDO	0000	0000	4								
00290	AD1	ASDO	0000	0000									
00300	AD1	ASDO	0000	0000									
00310	AD1	ASDO	0000	0000									
03180	AD2	BLQ MAN	0000	0000	3								
03190	AD2	BLQ MAN	0000	0000									
03200	AD2	BLQ MAN	0000	0000									
16060	ADCS	MAINT CTL COORD	8319	0000	1								
18060	AD1	GA REP	8319	0000	1								
22050	ADC	P/P MAINT SUPVR	8319	0000	1								
22060	AD1	P/P MAINTMAN	8319	0000	1								
22070	AD2	P/P MAINTMAN	8319	0000	3								
22080	AD2	P/P MAINTMAN	8319	0000									
22090	AD2	P/P MAINTMAN	8319	0000									
22100	AD3	P/P MAINTMAN	8319	0000	2								
22110	AD3	P/P MAINTMAN	8319	0000									
22120	AD3	P/P MAINTMAN	8319	0000									
22130	AD3	P/P MAINTMAN	8319	0000									
22140	ADAN	P/P MAINTMAN	8319	0000	4								
22150	ADAN	P/P MAINTMAN	8319	0000									
22160	ADAN	P/P MAINTMAN	8319	0000									
22170	ADAN	P/P MAINTMAN	8319	0000									
27050	AD1	PHASE SUPVR	8319	0000	1								
48010	AD2	P/P AIMD REPR	6418	0000	2								
48020	AD2	P/P AIMD REPR	6418	0000									
48030	AD3	P/P AIMD REPR	6418	0000	1								

TOTAL - 26

	HA	NMP	COH	P-1	P-2	P-3	P-4	P-5	P-6	P-7
E-9										
E-8										
E-7										
E-6										
E-5										
E-4										
E-3										
TOTAL										

Gains:		Losses:	
Rate/Name	Reporting Month	Rate/Name	Detaching Month
1.		1.	
2.		2.	
3.		3.	
4.		4.	
5.		5.	
6.		6.	
7.		7.	

MANPOWER MANAGEMENT/PERSONNEL ACCOUNTING/ATSS ORGANIZATION WITHIN THE PERSONNEL OFFICES

To effectively implement the Manpower Management System within the squadron, a reorganization within the Personnel Office is necessary in order that the following related job assignments will be performed by one Personnelman with the Office Supervisor having knowledge and control of his functions:

(a) EDVR Update

(b) Diary Submissions

(c) OCR Quality Control Clerk

(d) NEC Change Recommendation (NAVPERS 1221/1) Submissions

(e) Daily Muster Report Preparations

(f) PERSMAR's Submissions

(g) Verification of incoming messages/EPADS on Prospective Gains (including PRD adjustments)

(h) ATSS PN

Upon completion of training and assistance, the assigned Office Supervisor and ATSS PN will serve as contact point for matters involving manpower management for the PATWING TEN Management Team

The PATWING TEN Manpower Management Team will provide an initial training for all squadron Personnel Officers, ATSS Officers, Maintenance Training Officers, Personnel Office Supervisors and ATSS PNs. This initial training will be announced by separate message as to scheduled date and location. Upon completion of initial training and indoctrination to the system, the PATWING TEN Manpower Management Team will visit squadron Personnel Offices periodically to assist the Office Supervisors and ATSS PNs in maintaining the program within their squadron.

Enclosure (2)

GUIDELINE FOR ENLISTED DISTRIBUTION VERIFICATION REPORT (EDVR) UPDATE AND CORRECTIONS

1. NAVMILPERSCOMINST 1080.1 is used in verifying and updating data contained in the EDVR. Appropriate actions at the command level are also delineated whenever errors are noted during the daily verification of the EDVR, (i.e. speedletter submission, OCR submission, NAVPERS 1221/1, etc.).

2. The EDVR is organized into nine sections:

a. Sections 1 through 3 contain information on members which are extracted from the activity account and requires special attention and/or action by the command. These special actions are Expired Prospective Gains/Losses (EXPG/EXPL), Expired and Current EAOS for Career and Non-Career Designated Individuals, Deserters and Personnel on board for temporary duty status. These sections also provide information on future personnel actions which can be used by the command in its overall management of personnel and in planning future administrative actions (i.e. career counseling sessions, OCR action on NAVPERS 1070/621 and 622, etc.).

b. Section 4 contains the total personnel account of the command (including those members reflected in sections 1 through 3) and is arranged by rating groups.

c. Sections 5 through 8 contain statistical data and billet authorized information (reflecting Current Billet Authorized (BA), Current NMP and P7 NMP changes).

d. Section 9 contains NEC Management Information.

3. ACCURACY OF THE EDVR. Individual detailing (ordering personnel to and from an activity) and manning decisions by EPMAC and NMPC are, for the most part, based on information contained in the EDVR account. Therefore, it is extremely important that commands keep the EDVR updated on a daily basis reflecting pen and ink changes as they occur and submission of corrective action to NMPC.

4. DAILY UPDATE OF EDVR. Make pen and ink changes to the EDVR for each item of information that is changed as a result of the submission of diaries, OCR document, NEC change recommendations, PRD adjustments by EPADS or messages, Navy-wide exams results (advancement of non-designated personnel), modification of orders for prospective gains/losses, cancellation of orders and additions of prospective gains in sections 1 and 4. Line through the obsolete data, where appropriate, and write in the new data in the same column(s). In column AA through CC, in the case of changes submitted by diaries, OCR forms, NAVPERS 1221/1 or speedletters, write in the DTG of the diaries, OCR transmittal number and julian date, date 1221/1 and speedletter mailed. The above action if done routinely, will provide an accurate data on individuals as well as documenting those actions being accomplished by the Personnel Office to correct discrepancies.

NOTE: As pen and ink changes are made to the EDVR, timely updating of the ATSS data base is also necessary. PATWING TEN will monitor squadron manning rosters (ATSS) and verified monthly EDVRs, and verify that actions outlined above are done on a daily basis through review of verified monthly EDVRs provided and ATSS terminal scan.

GUIDELINE FOR SUBMISSION OF NAVY ENLISTED CLASSIFICATION (NEC) CHANGE RECOMMENDATIONS TO UPDATE THE EDVR

Navy Enlisted Classification (NEC) Codes facilitate providing the command with the special skills it needs for proper manning. Therefore, if the command's Manpower Authorization (OPNAV 1000/2) does not reflect correct NEC's, it will not receive the skilled people it needs. The following procedures can be used by the squadron to insure that the correct NECs are reflected in individuals' service records, EDVR and ATSS Data Base:

(1) Check Manpower Authorization (OPNAV 1000/2) to ensure NEC's are current and reflect command needs.

(2) Check the NEC Manual (NAVPERS 18068D) to ascertain if an NEC is associated with a new equipment installed in the squadron. If so, request a change to the Manpower Authorization in accordance with the guidelines set forth in OPNAVINST 1000.16E to reflect this NEC.

(3) Alternatively, when an NEC is no longer considered a valid requirement, initiate a Manpower Authorization Change to delete currently authorized NECs and request new ones. As soon as this administrative action is taken and the reprogramming changes are approved by CNO, the distribution system will react accordingly to assign qualified personnel. Furthermore, changes to NEC authorizations will also trigger the Navy's training pipeline and make necessary adjustments to projections for school quota requirements.

(4) Validate NEC's on individuals in a rigorous manner. This is done through the Enlisted Distribution Verification Report (EDVR) monthly and daily verification. If an individual is qualified for an NEC that is not on the EDVR, ensure a correction is made by submission of NAVPERS 1221/1 (NEC Change Recommendation) to CNMPC, Washington, DC. Those requested and approved by CNMPC will be reflected on the EDVR and acknowledged by the return of original NAVPERS 1221/1 to the command. The appearance on the EDVR is authorization to make the appropriate entry on the enlisted service record Page 4.

(5) Remove NEC's from individuals for which they are no longer qualified by submission of NAVPERS 1221/1. This is absolutely essential in order to prevent those NEC's from counting against on-board strength.

(6) Review all messages and EPAD's pertaining to prospective gains to ensure that reporting individuals have the NEC's appropriate to their new command or that the individuals are enroute to appropriate school/training to earn the NEC's prior to reporting on board.

In order to accomplish the actions recommended above on a routine basis within the squadron, the following actions are recommended:

(1) Schedule a weekly meeting with Personnel Office/Training Department/Maintenance Training representatives to update NEC actions and identify administrative problems.

(2) Identify requirements for modification of PCS orders immediately (if required) upon receipt of orders.

(3) The Personnel Office, with routine checks by Departments/Divisions involved, must follow-up to ensure appropriate action has been taken by CNMPC.

(4) Maintain close contact with the VP squadron monitor at EPMAC New Orleans, LA to continually update current EDVR and NEC requirements. Telephone number is Autovon 363-1523.

Only by aggressive attention at the Division/Branch and Personnel Office levels can NEC deficiencies and manning problems be resolved. To ensure that NEC requirements/updates are initiated at the Division level, page 3 of enclosure (4) is provided for local reproduction and distribution to all division personnel involved in manning and personnel accounting. This document can be attached with the activity's copy of NAVPERS 1221/1 until a response is received from CNMPC and EDVR change in columns K and L are reflected. Upon submission of NAVPERS 1221/1 to CNMPC, a pen and ink change must be entered on the EDVR and an NEC change (Items 16, 17, 18 and 19) on the ATSS Data base must be completed.

DNEC/NEC CHANGE RECOMMENDATION

DATE: ________________

From: ________________Division Supervisor/Branch Officer
To: Personnel Officer

Subj: DNEC/NEC Change Recommendation

Ref: (a) NAVPERS 18068D

1. NAME: ________________________________
2. RATE: ________________________________
3. SSN: ________________________________
4. CURRENT DNEC: ________________________
5. RECOMMENDED DNEC: ____________________
6. CURRENT PNEC/SNEC (Shown in current EDVR): ____________________
7. RECOMMENDED PNEC/SNEC: ____________________
8. JUSTIFICATION: (Completion of required course of instruction, courses, training program, PQS and OJT)

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Submitted by:	Noted by:	Approved by:
____________________	________________	____________________
Division/Branch Officer	Department Head	Training Officer or Maintenance Training Officer (as appropriate)

DATE: ________________

From: Personnel Officer
To: ____________________Division/Branch Officer

Subj: DNEC/NEC Change Recommendation

1. NMPC Washington DC has approved/disapproved the following DNEC/NEC's ______ ____________________in the case of ______________________________. Appropriate entry will be made on his/her service record and the ATSS data system when reflected on the EDVR.

Enclosure (4)

NEC'S AUTHORIZED FOR VP

ET - 1438 Communication Security Devices Equipment (KW-7) Technician
Source Ratings: ET, RM, CTM, AT

ET - 1573 AIMS (TSEC/CRYPTO) Technician
Performs depot level maintenance on TSEC/KI-1A cryptographic equipment at crypto repair facilities or instructs at training sites.
Source Ratings: ET, AT

YN - 2516 Legal Clerk
Prepares correspondence, records, and allied papers or courts-martial, courts of inquiry, investigations, military commissions or conferences. Employs knowledge of UCMJ: Manual for Courts-Martial, United States; Manual of the Judge Advocate General; and other administrative manuals and publications. Possesses a basic understanding of the closed-microphone court reporting system.

AZ - 6313 3-M System Data Analyst
Records and analyzes data derived from the Navy Maintenance and Material Management (3-M) System. Analyzes and compares performance with maintenance plans and schedules. Checks machine reports and provides assistance to the work center supervisors.
Source Rating: AZ

AD - 6418 T-56 Turbo Fan Jet Engine IMA Technician
Performs intermediate level maintenance on T-56 turbo fan jet engines.
Source Ratings: AD

AX - 6526-6529 Aviation Antisubmarine Warfare IMA Technician
AX - 6526 Aviation ASW (MAD) Technician
Source Ratings: AX, AT

AX - 6534 AQA-7 DIFAR System IMA Techician
Performs intermediate level maintenance on AQA-7 recorder system ARAs and maintains AQM-18 test central.
Source Rating: AX

AX - 6564 ASW Acoustic Detection Systems IMA Technician
Performs intermediate level maintenance on the OTPI, ASW tape recorder, acoustic signal generator, bathythermograph recorder, submarine anomaly, detector and associated selector control systems of the P-3 aircraft.
Source Rating: AX

AX - 6583 P-3C Sensor Station 1 & 2 (AQA-7) OMA Technician
Performs organizational level maintenance on Sensor Station One and Two (AQA-7) equipment.
Source Rating: AX

AX - 6585 P-3C Sensor Station Three (Radar and Display) OMA Technician
Performs organizational level maintenance on P-3C Sensor Station Three Radar and display equipment.
Source Ratings: AX, AT

AX - 6586 P-3C OMA Weapons System Technician
Performs organizational level maintenance on the entire avionics system of the P-3C aircraft.
Source Ratings: AX, AT

AT - 6605 Aircraft Navigation Equipment IMA Technician
Repairs various navigation equipment at the intermediate maintenance level.
Source Ratings: AT

AT - 6606 Aircraft Doppler Radar Navigation IMA Technician
Repairs aircraft doppler radar navigation equipment at the intermediate maintenance level.
Source Rating: AT

AT - 6609 Aircraft Electronic Identification (IFF) IMA Technician
Repairs various interrogators and transponders (IFF, except crypto) at the intermediate maintenance level.
Source Rating: AT

AT - 6611 Aircraft Communications Equipment IMA Technician
Repairs various High Frequency (HF), Ultra High Frequency (UHF), Very High Frequency (VHF), Automatic Directions Finder (ADF), and Intercommunications Systems (ICS) at the intermediate maintenance level.
Source Rating: AT

AT - 6612 Aircraft TACAN Maintenance IMA Technician
Performs intermediate level maintenance on various aircraft TACAN equipment.
Source Rating: AT

AT - 6613 ARC-143/ARC-161 Radio Set IMA Technician
Performs intermediate level maintenance on ARC-143/CU 1809 Transceiver/Coupler, ARC-143 or ARC-161 UHF Communication system ARAs.
Source Rating: AT

AT - 6629 USM-449(V) and AAI 5500 Series ATE Operator
Operates USM-449(V) and AAI 5500 Series ATE. Determines malfunctions in avionic equipment to the component level at the intermediate maintenance level. Rechecks equipment prior to reissue, ensure malfunction is remedied.
Source Rating: AT, AX

AT - 6634 Communications Security Devices Equipment (P-3/S-3 Aircraft) IMA Technician
Performs intermediate level maintenance on communications security devices equipment from P-3 or S-3 aircraft.

AT - 6664 APS-115 Search Radar and AXR-13 LLLTV IMA Technician

Performs intermediate level maintenance on APS-115 search radar or AXR-13 LLLTV systems ARAs.
Source Rating: AT

AT - 6672 P-3C COMNAV OMA Technician

Performs organizational level maintenance on P-3C communications and navigation equipment.
Source Rating: AT

AO - 6802 Strike Intermediate Armament Maintenanceman

Performs intermediate level maintenance on strike aviation armament equipment.
Source Rating: AO

AO - 6803 P3 Intermediate Ordnance Maintenance Technician

Performs intermediate level maintenance on sonobuoy launches, marine marker ejector, bomb racks, and associated control panels. Utilizes test equipment to perform tests, checks, and fault isolation of weapons replaceable assemblies (WRAs) installed in P3 aircraft.
Source Rating: AO

AO - 6804 P3 Organizational Level Ordnance Maintenance Technician

Performs organizational level maintenance on P-3C armament/ordnance equipment.
Source Rating: AO

AE - 7117 ASN-84 Inertial Navigation System IMA Technician

Performs intermediate level maintenance on ASN-84 intertial navigation equipment installed on P-3C aircraft.
Source Rating: AE

AE - 7136 PB-20 Autopilot IMA Technician

Performs intermediate level maintenance on PB-20N autopilot or ASW-31 AFCS, electrical components and instruments in support of P-3 aircraft.
Source Rating: AE

AE - 7181 P-3C Integrated Electrical System OMA Specialist

Performs integrated organizational level maintenance on ASN-84 INS, ASW-31 AFCS, LTN-72 INS and other electrical components.
Source Rating: AE

AM - 7212 Stationary Hydraulics Test Stand Operator/Maintenanceman

Tests and repairs hydraulic components through the use of various stationary hydraulic test stands at the intermediate maintenance level.
Source Rating: AM

AW - 7821 Improved System Acoustic Operator
Operates acoustic sensor in P-3C, S-2G or DIFAR equipped P-3A/B aircraft.
Source Rating: AW

AW - 7851 Non-Acoustic Operator
Operates radar, MAD, and ESM equipment in VS and VP aircraft other than P-3C and S-3A.

AW - 7861 Improved System Non-Acoustic Operator
Operates non-acoustic sensor station of P-3C integrated ASW system.

AW - 7861 Improved System Non-Acoustic Operator
Operates non-acoustic sensor station of P-3C integrated ASW system.

PH - 8192 Photographic Equipment Repairman
Performs intermediate maintenance on mechanically operated photographic equipment used in naval photography.
Source Rating: PH

8200-8298 Naval Aircrewman
Personnel of various ratings assigned under a Distribution NEC of 82XX by the Commander, Military Personnel Command as Naval Aircrewman are in a permanent flight status. They perform duties in the various aircrew positions determined by the Chief of Naval Operations in fixed and rotary wing aircraft based ashore and afloat. Members who are not volunteers for flying duty or who are not qualified for flight duties shall not retain these NEC's.

(1) These NEC's reflect a member's aircrew qualifications and verify the member's entitlement to flight pay. They do not however, authorize payment nor determine the category of payment.
(2) The participation in the aircrew program and the principles governing payment therefore are contained in BUPERSINST 1326.3B. Compliance with this instruction is mandatory prior to submission of any 82XX NEC recommendation.
(3) Individuals should be recommended for assignment of these NEC's as soon as respective qualifications are obtained.
(4) Final qualifications for AC designator are not a prerequisite for NEC assignment.
(5) Basic specialty NEC's will be assigned upon satisfactory completion of readiness squadron training or command training syllabi when formalized training is not required. Regardless of NEC, AC designation may only be awarded after successful completion of operational standards prescribed by the Chief of Naval Operations.
(6) These NEC's are the primary means of identification for aircrewmen. Commands shall ensure submission of NAVPERS 1221/1 immediately upon qualification for the various NEC's and ensure their removal if a member disqualifies from future aircrew duties.

8201 - Naval Aircrewman Candidate

Performs assignments in training, for flight crewman. (This NEC is applied to those personnel undergoing flight indoctrination training and evaluation prior to completing a course of instruction leading to a crewmember NEC).

Ratings Assigned: Those ratings for the crewmember position for which training is being conducted.

NOTES: (1) Members awarded this NEC must meet basic aircrew prerequisites, be in training for a valid 82XX billet, and qualify for such training under the provisions of the BUPERSMAN, BUPERSINST 1326.3B, and TRANSMAN 9.12.

(2) Members awarded this NEC who do not qualify for aircrew designation within 18 months as prescribed by OPNAVINST 3710.71 and BUPERSINST 1326.3B shall be discontinued from training.

(3) This NEC will not be used to identify billets except within student UIC's.

8251 P-3 Flight Engineer

Performs in-flight duties as a P-3 flight engineer. Is knowledgeable of all aircraft systems, emergency procedures, and flight equipment.

Ratings Assigned: AD, AM, AE

8263 P-3C In-Flight Avionic Maintenance Technician

Performs in-flight duties of fault isolation and component repair of P-3C avionics equipment at the organizational level. Is knowledgeable of aircraft avionics and computer systems, emergency procedures, and flight equipment.

Ratings Assigned: AT, AX

NOTE: AT and AX personnel removed from flight status for whatever reason shall be recoded AX-6586.

8271 P-3 Flight Crew Ordnanceman

Performs in-flight duties as a flight crew ordnanceman on P-3 aircraft. Is knowledgeable of aircraft ordnance systems, weapons loading, emergency procedures, and flight equipment.

Rating Assigned: AO

NOTE: Completion of applicable course for P-3C aircraft is required. OJT is acceptable for P-3A/B aircraft.

8288 Aerial Cameraman

Performs in-flight duties as an aerial cameraman. Is knowledgeable of photographic equipment, aerial photographic techniques, aircraft equipment, emergency procedures, and flight procedures.

Rating Assigned: PH

8319 P-3 System Organizational Maintenance Technician

Source Ratings: AD, AM, AO, PH

HM - 8406 Aerospace Medicine Technician

Assists flight surgeon or medical officer in special examinations and treatments for naval aviators and flight personnel. Operates special aviation medical apparatus such as pressure-chamber machines. Assists in conducting aviation medical tests. Maintains aviation medical records and files.

Source Ratings: HM

PATROL WING TEN ENLISTED MANPOWER MANAGEMENT TEAM

Function. Serves as advisory, training, and monitoring team in the areas of manpower management, personnel accounting and ATSS management in PATWING TEN and its seven deployable squadrons. The team will train and assist squadron PN's in keeping the EDVR accurate, the ATSS Data Base updated, and ensuring that routine office manpower management procedures are accomplished in accordance with current directives and manuals. Upon implementation of the program in the squadron, members of the team will provide further assistance and serve as monitors to ensure the system is routinely utilized to the fullest extent practicable.

Follow-up reports will be forwarded to squadrons on a regular basis as to the progress of their Personnel Offices in implementing the program. Progress reports will be based on updated EDVRs provided to PATWING TEN on a monthly basis, ATSS printouts, ATSS change inputs mailed to PATWING TEN by deployed squadrons, and follow-up visits to squadron Personnel Offices.

REFERENCES:

The following reference materials will be utilized by the team to familiarize the squadron manpower management representatives:

1. NAVMILPERSCOMINST 1080.1 (EDVR Verification Procedures)

2. NAVPERS 18068D (NEC Manual)

3. OPNAVINST 1000.16E (Manual of Total Force Manpower Policies and Procedures)

4. Diary Message Reporting System Manual (EPMACINST 1080.4)

5. ATSS User's Guide Manual

The following documents will be made available to the team during their scheduled squadron visits:

1. Current and updated EDVR

2. Current Manpower Authorization (OPNAV 1000/2)

3. Current ATSS Manning Roster (Based on Distributed BSN and by Rate/Paygrade)

4. OCR Tickler Board

5. Diary Files

6. NEC Change Recommendation (NAVPERS 1221/1) Tickler Board

7. EPADs and Messages on Prospective Gains/Losses

In addition to the above, an ATSS Terminal (ADM-3) Machine must be located in the Personnel Office for easy access to ATSS data.

INITIAL DISTRIBUTION LIST

		No. Copies
1.	Defense Technical Information Center Cameron Station Alexandria, Virginia 22314	2
2.	Library, Code 0142 Naval Postgraduate School Monterey, California 93943	2
3.	Department Chairman, Code 54 Department of Administrative Science Naval Postgraduate School Monterey, California 93943	1
4.	LCDR James P. Butler 3913 Kimsue Way San Diego, California 92154	2
5.	LT John D. Blankenship 15719 Buck Lane Dumfries, Virginia 22079	2
6.	Commanding Officer ATTN: CDR M. Chamberlain Helicopter Combat Support Squadron Eleven Naval Air Station North Island San Diego, California 92135	1
7.	Commander Patrol Wings U.S. Pacific Fleet Naval Air Station Moffett Moffett Field, California 94035	2
8.	Commander Patrol Wing Ten Naval Air Station Moffett Moffett Field, California 94035	2
9.	Commander Patrol Wings U.S. Pacific Fleet ATTN: CAPT Henry H. Smith, USNR Naval Air Station Moffett Moffett Field, California 94035	1
10.	Center for Naval Analysis ATTN: Mr. Gary Purdum Naval Studies Group 2000 N. Beauregard St. Alexandria, Virginia 22311	1

11. Director, Training and Education 1
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    (Program Management)
    Department of Defense
    Washington, D.C. 20301

12. Special Assistant for Education and Training 1
    Office of the Deputy Assistant Secretary
    (Manpower)
    Department of the Navy
    Washington, D.C. 20301

13. Commander Officer 1
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    Patrol Squadron Thirty-One
    Naval Air Station Moffett
    Moffett Field, California 94035

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Thesis
B945 Butler
c. 1 A measure of maintenance training/qualification readiness and its impact on billet life cycle cost.